



## SEQUENCE LISTING

<110> Yan, Riqiang  
Tomasselli, Alfredo G.  
Gurney, Mark E.  
Emmons, Thomas L.  
Bienkowski, Mike J.  
Heinrikson, Robert L.

<120> SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY

<130> 29915/00281EUS

<140> 10/801,493

<141> 2004-03-16

<150> 09/908,943

<151> 2001-07-19

<150> 60/219,795

<151> 2000-07-19

<160> 199

<170> PatentIn Ver. 2.0

<210> 1

<211> 2070

<212> DNA

<213> Homo sapiens

<400> 1

atggcccaag	ccctgccctg	gctcctgctg	tggatgggag	cgaggagtgt	gcctgcccac	60
ggcaccacag	acggcatccg	gctgcccctg	cgcagcggcc	tggggggcgc	ccccctgggg	120
ctgcggctgc	cccgggagac	cgacgaagag	cccaggagag	ccggccggag	gggcagcttt	180
gtggagatgg	tggacaacct	gaggggcaag	tcggggcagg	gctactacgt	ggagatgacc	240
gtgggcagcc	ccccgcagac	gctcaacatc	ctgggtggata	caggcagcag	taactttgca	300
gtgggtgctg	ccccccaccc	cttcctgcat	cgctactacc	agaggcagct	gtccagcaca	360
taccgggacc	tccggaagg	tgtgtatgtg	ccctacaccc	agggcaagt	ggaaggagg	420
ctgggcaccg	acctggtaag	catcccccat	ggccccaacg	tactgtgctg	tgccaacatt	480
gtgcccatac	ctgaatcaga	caagttcttc	atcaacggct	ccaactggga	aggcatcctg	540
gggctggcct	atgctgagat	tgccaggcct	gacgactccc	tggagccttt	ctttgactct	600
ctggtaaaag	agaccacagt	tcccaacctc	ttctccctgc	acctttgtgg	tgctggcttc	660
cccctcaacc	agtctgaagt	gctggcctct	gtcggaggga	gcatgatcat	tggaggtatc	720
gaccactcgc	tgtacacagg	cagtctctgg	tatacaccca	tccggcggga	gtggtattat	780
gaggtcatca	ttgtgcgggt	ggagatcaat	ggacaggatc	tgaaaatgga	ctgcaaggag	840
tacaactatg	acaagagcat	tgtggacagt	ggcaccacca	accttcgttt	gccaagaaa	900
gtgtttgaag	ctgcagtcaa	atccatcaag	gcagcctcct	ccacggagaa	gttccctgat	960
ggttttctgg	taggagagca	gctgggtgtg	tggcaagcag	gcaccacccc	ttggaacatt	1020
ttcccagtc	tctcactcta	cctaattggg	gaggttacca	accagtcctt	ccgcatcacc	1080
atccttccgc	agcaatacct	gcggccagtg	gaagatgtgg	ccacgtccca	agacgactgt	1140
tacaagtttg	ccatctcaca	gtcatccacg	ggcactgtta	tgggagctgt	tatcatggag	1200
ggcttctacg	ttgtctttga	tcggggccga	aaacgaattg	gctttgctgt	cagcgcttgc	1260
catgtgcacg	atgagttcag	gacggcagcg	gtggaaggcc	cttttgtcac	cttggacatg	1320
gaagactgtg	gctacaacat	tccacagaca	gatgagtcaa	ccctcatgac	catagcctat	1380
gtcatggctg	ccatctgcgc	cctcttcctg	ctgccactct	gcctcatggg	gtgtcagtgg	1440
cgctgcctcc	gctgcctgcg	ccagcagcat	gatgactttg	ctgatgacat	ctccctgctg	1500
aagtgaggag	gcccattggg	agaagataga	gattcccctg	gaccacacct	ccgtggttca	1560
ctttggtcac	aagtaggaga	cacagatggc	acctgtggcc	agagcacctc	aggaccttcc	1620
ccaccaccca	aatgcctctg	ccttgatgga	gaaggaaaag	gctggcaagg	tgggttccag	1680
ggactgtacc	tgtaggaaac	agaaaagaga	agaaagaagc	actctgctgg	cgggaatact	1740
cttggtcacc	tcaaatatta	gtcgggaaat	tctgctgctt	gaaacttcag	ccctgaacct	1800

```

ttgtccacca ttcctttaaa ttctccaacc caaagtattc ttcttttctt agtttcagaa 1860
gtactggcat cacacgcagg ttaccttggc gtgtgtccct gtgggtaccct ggcagagaag 1920
agaccaagct tgtttccctg ctggccaaag tcagtaggag aggatgcaca gtttgctatt 1980
tgcttttagag acagggactg tataaacaag cctaacattg gtgcaaagat tgcctcttga 2040
ataaaaaaaaa aaaaaaaaaa aaaaaaaaaa

```

<210> 2  
 <211> 501  
 <212> PRT  
 <213> Homo sapiens

```

<400> 2
Met Ala Gln Ala Leu Pro Trp Leu Leu Leu Trp Met Gly Ala Gly Val
  1           5           10           15

Leu Pro Ala His Gly Thr Gln His Gly Ile Arg Leu Pro Leu Arg Ser
          20           25           30

Gly Leu Gly Gly Ala Pro Leu Gly Leu Arg Leu Pro Arg Glu Thr Asp
  35           40           45

Glu Glu Pro Glu Glu Pro Gly Arg Arg Gly Ser Phe Val Glu Met Val
  50           55           60

Asp Asn Leu Arg Gly Lys Ser Gly Gln Gly Tyr Tyr Val Glu Met Thr
  65           70           75           80

Val Gly Ser Pro Pro Gln Thr Leu Asn Ile Leu Val Asp Thr Gly Ser
          85           90           95

Ser Asn Phe Ala Val Gly Ala Ala Pro His Pro Phe Leu His Arg Tyr
          100          105          110

Tyr Gln Arg Gln Leu Ser Ser Thr Tyr Arg Asp Leu Arg Lys Gly Val
          115          120          125

Tyr Val Pro Tyr Thr Gln Gly Lys Trp Glu Gly Glu Leu Gly Thr Asp
          130          135          140

Leu Val Ser Ile Pro His Gly Pro Asn Val Thr Val Arg Ala Asn Ile
          145          150          155          160

Ala Ala Ile Thr Glu Ser Asp Lys Phe Phe Ile Asn Gly Ser Asn Trp
          165          170          175

Glu Gly Ile Leu Gly Leu Ala Tyr Ala Glu Ile Ala Arg Pro Asp Asp
          180          185          190

Ser Leu Glu Pro Phe Phe Asp Ser Leu Val Lys Gln Thr His Val Pro
          195          200          205

Asn Leu Phe Ser Leu His Leu Cys Gly Ala Gly Phe Pro Leu Asn Gln
          210          215          220

Ser Glu Val Leu Ala Ser Val Gly Gly Ser Met Ile Ile Gly Gly Ile
          225          230          235          240

Asp His Ser Leu Tyr Thr Gly Ser Leu Trp Tyr Thr Pro Ile Arg Arg
          245          250          255

Glu Trp Tyr Tyr Glu Val Ile Ile Val Arg Val Glu Ile Asn Gly Gln
          260          265          270

```

Asp Leu Lys Met Asp Cys Lys Glu Tyr Asn Tyr Asp Lys Ser Ile Val  
 275 280 285  
 Asp Ser Gly Thr Thr Asn Leu Arg Leu Pro Lys Lys Val Phe Glu Ala  
 290 295 300  
 Ala Val Lys Ser Ile Lys Ala Ala Ser Ser Thr Glu Lys Phe Pro Asp  
 305 310 315 320  
 Gly Phe Trp Leu Gly Glu Gln Leu Val Cys Trp Gln Ala Gly Thr Thr  
 325 330 335  
 Pro Trp Asn Ile Phe Pro Val Ile Ser Leu Tyr Leu Met Gly Glu Val  
 340 345 350  
 Thr Asn Gln Ser Phe Arg Ile Thr Ile Leu Pro Gln Gln Tyr Leu Arg  
 355 360 365  
 Pro Val Glu Asp Val Ala Thr Ser Gln Asp Asp Cys Tyr Lys Phe Ala  
 370 375 380  
 Ile Ser Gln Ser Ser Thr Gly Thr Val Met Gly Ala Val Ile Met Glu  
 385 390 395 400  
 Gly Phe Tyr Val Val Phe Asp Arg Ala Arg Lys Arg Ile Gly Phe Ala  
 405 410 415  
 Val Ser Ala Cys His Val His Asp Glu Phe Arg Thr Ala Ala Val Glu  
 420 425 430  
 Gly Pro Phe Val Thr Leu Asp Met Glu Asp Cys Gly Tyr Asn Ile Pro  
 435 440 445  
 Gln Thr Asp Glu Ser Thr Leu Met Thr Ile Ala Tyr Val Met Ala Ala  
 450 455 460  
 Ile Cys Ala Leu Phe Met Leu Pro Leu Cys Leu Met Val Cys Gln Trp  
 465 470 475 480  
 Arg Cys Leu Arg Cys Leu Arg Gln Gln His Asp Asp Phe Ala Asp Asp  
 485 490 495  
 Ile Ser Leu Leu Lys  
 500

<210> 3  
 <211> 1977  
 <212> DNA  
 <213> Homo sapiens

<400> 3  
 atggcccaag ccttgccttg gctcctgctg tggatgggag cgggagtgct gcctgcccac 60  
 ggcacccagc acggcatccg gctgcccctg cgcagcggcc tggggggcgc cccctgggg 120  
 ctgaggctgc cccgggagac cgacgaagag cccgaggagc ccggccggag gggcagcttt 180  
 gtggagatgg tggacaacct gaggggcaag tcggggcagg gctactacgt ggagatgacc 240  
 gtgggcagcc cccgcgagac gctcaacatc ctggtggata caggcagcag taactttgca 300  
 gtgggtgctg cccccacccc cttcctgcat cgctactacc agaggcagct gtccagcaca 360  
 taccgggacc tccggaaggg tgtgtatgtg ccctacaccc agggcaagtg ggaaggggag 420  
 ctgggcaccg acctggtaag catcccccat ggcccacacg tcactgtgcg tgccaacatt 480  
 gctgccatca ctgaatcaga caagttcttc atcaacggct ccaactggga aggcattcctg 540  
 gggctggcct atgctgagat tgccaggctt tgtggtgctg gcttccccct caaccagtct 600  
 gaagtgtgag cctctgtcgg agggagcatg atcattggag gtatcgacca ctgcgtgtac 660

```

acaggcagtc tctggtatac acccatccgg cgggagtggt attatgaggt gatcattgtg 720
cgggtggaga tcaatggaca ggatctgaaa atggactgca aggagtacaa ctatgacaag 780
agcattgtgg acagtggcac caccaacctt cgtttgccca agaaagtgtt tgaagctgca 840
gtcaaatacca tcaaggcagc ctctccacg gagaagttcc ctgatggttt ctggctagga 900
gagcagctgg tgtgctggca agcaggcacc accccttgga acattttccc agtcatctca 960
ctctacctaa tgggtgaggt taccaaccag tccttccgca tcaccatcct tccgcagcaa 1020
tacctgcggc cagtgaaga tgtggccacg tcccaagacg actgttataa gtttgccatc 1080
tcacagtcac ccacgggcac tggtatggga gctgttatca tggagggcct ctacgttgtc 1140
tttgatcggg cccgaaaacg aattggcttt gctgtcagcg cttgccatgt gcacgatgag 1200
ttcaggacgg cagcgggtgga aggccctttt gtcaccttgg acatggaaga ctgtggctac 1260
aacattccac agacagatga gtcaaccctc atgaccatag cctatgtcat ggctgccatc 1320
tgcgccctct tcatgctgcc actctgcctc atgggtgtgtc agtggcgctg cctccgctgc 1380
ctgcgccagc agcatgatga ctttgctgat gacatctccc tgctgaagtg aggaggccca 1440
tgggcagaag atagagattc ccctggacca cacctccgtg gttcactttg gtcacaagta 1500
ggagacacag atggcacctg tggccagagc acctcaggac cctccccacc caccaaagtc 1560
ctctgccttg atggagaagg aaaaggctgg caaggtgggt tccagggact gtacctgtag 1620
gaaacagaaa agagaagaaa gaagcactct gctggcggga atactcttgg tcacctcaaa 1680
ttaaagtcgg gaaattctgc tgcttgaaac ttcagccctg aacctttgtc caccattcct 1740
ttaaattctc caaccctcctc tttcttctt ttcttagttt cagaagtact ggcatcacac 1800
gcaggttacc ttggcgtgtg tccctgtggt accctggcag agaagagacc aagcttggtt 1860
ccctgctggc caaagtcagt aggagaggat gcacagtttg ctatttgctt tagagacagg 1920
gactgtataa acaagcctaa cattggtgca aagattgcct cttgaaaaaa aaaaaaa 1977

```

<210> 4

<211> 476

<212> PRT

<213> Homo sapiens

<400> 4

```

Met Ala Gln Ala Leu Pro Trp Leu Leu Leu Trp Met Gly Ala Gly Val
  1              5              10              15

```

```

Leu Pro Ala His Gly Thr Gln His Gly Ile Arg Leu Pro Leu Arg Ser
          20              25              30

```

```

Gly Leu Gly Gly Ala Pro Leu Gly Leu Arg Leu Pro Arg Glu Thr Asp
          35              40              45

```

```

Glu Glu Pro Glu Glu Pro Gly Arg Arg Gly Ser Phe Val Glu Met Val
          50              55              60

```

```

Asp Asn Leu Arg Gly Lys Ser Gly Gln Gly Tyr Tyr Val Glu Met Thr
          65              70              75              80

```

```

Val Gly Ser Pro Pro Gln Thr Leu Asn Ile Leu Val Asp Thr Gly Ser
          85              90              95

```

```

Ser Asn Phe Ala Val Gly Ala Ala Pro His Pro Phe Leu His Arg Tyr
          100             105             110

```

```

Tyr Gln Arg Gln Leu Ser Ser Thr Tyr Arg Asp Leu Arg Lys Gly Val
          115             120             125

```

```

Tyr Val Pro Tyr Thr Gln Gly Lys Trp Glu Gly Glu Leu Gly Thr Asp
          130             135             140

```

```

Leu Val Ser Ile Pro His Gly Pro Asn Val Thr Val Arg Ala Asn Ile
          145             150             155             160

```

```

Ala Ala Ile Thr Glu Ser Asp Lys Phe Phe Ile Asn Gly Ser Asn Trp
          165             170             175

```

```

Glu Gly Ile Leu Gly Leu Ala Tyr Ala Glu Ile Ala Arg Leu Cys Gly

```

180					185					190					
Ala	Gly	Phe	Pro	Leu	Asn	Gln	Ser	Glu	Val	Leu	Ala	Ser	Val	Gly	Gly
	195						200					205			
Ser	Met	Ile	Ile	Gly	Gly	Ile	Asp	His	Ser	Leu	Tyr	Thr	Gly	Ser	Leu
	210					215					220				
Trp	Tyr	Thr	Pro	Ile	Arg	Arg	Glu	Trp	Tyr	Tyr	Glu	Val	Ile	Ile	Val
	225					230					235				240
Arg	Val	Glu	Ile	Asn	Gly	Gln	Asp	Leu	Lys	Met	Asp	Cys	Lys	Glu	Tyr
				245					250					255	
Asn	Tyr	Asp	Lys	Ser	Ile	Val	Asp	Ser	Gly	Thr	Thr	Asn	Leu	Arg	Leu
			260					265					270		
Pro	Lys	Lys	Val	Phe	Glu	Ala	Ala	Val	Lys	Ser	Ile	Lys	Ala	Ala	Ser
		275					280					285			
Ser	Thr	Glu	Lys	Phe	Pro	Asp	Gly	Phe	Trp	Leu	Gly	Glu	Gln	Leu	Val
	290					295					300				
Cys	Trp	Gln	Ala	Gly	Thr	Thr	Pro	Trp	Asn	Ile	Phe	Pro	Val	Ile	Ser
	305					310					315				320
Leu	Tyr	Leu	Met	Gly	Glu	Val	Thr	Asn	Gln	Ser	Phe	Arg	Ile	Thr	Ile
				325					330					335	
Leu	Pro	Gln	Gln	Tyr	Leu	Arg	Pro	Val	Glu	Asp	Val	Ala	Thr	Ser	Gln
			340					345					350		
Asp	Asp	Cys	Tyr	Lys	Phe	Ala	Ile	Ser	Gln	Ser	Ser	Thr	Gly	Thr	Val
		355					360					365			
Met	Gly	Ala	Val	Ile	Met	Glu	Gly	Phe	Tyr	Val	Val	Phe	Asp	Arg	Ala
	370					375					380				
Arg	Lys	Arg	Ile	Gly	Phe	Ala	Val	Ser	Ala	Cys	His	Val	His	Asp	Glu
	385					390					395				400
Phe	Arg	Thr	Ala	Ala	Val	Glu	Gly	Pro	Phe	Val	Thr	Leu	Asp	Met	Glu
			405					410						415	
Asp	Cys	Gly	Tyr	Asn	Ile	Pro	Gln	Thr	Asp	Glu	Ser	Thr	Leu	Met	Thr
			420					425					430		
Ile	Ala	Tyr	Val	Met	Ala	Ala	Ile	Cys	Ala	Leu	Phe	Met	Leu	Pro	Leu
	435						440					445			
Cys	Leu	Met	Val	Cys	Gln	Trp	Arg	Cys	Leu	Arg	Cys	Leu	Arg	Gln	Gln
	450					455					460				
His	Asp	Asp	Phe	Ala	Asp	Asp	Ile	Ser	Leu	Leu	Lys				
	465					470					475				

<210> 5

<211> 14

<212> PRT

<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<400> 5  
Lys Val Glu Ala Asn Tyr Glu Val Glu Gly Glu Arg Lys Lys  
1 5 10

<210> 6  
<211> 15  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<400> 6  
Lys Val Glu Ala Asn Tyr Glu Val Glu Gly Glu Arg Cys Lys Lys  
1 5 10 15

<210> 7  
<211> 14  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<400> 7  
Lys Val Glu Ala Asn Tyr Ala Val Glu Gly Glu Arg Lys Lys  
1 5 10

<210> 8  
<211> 15  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<400> 8  
Lys Val Glu Ala Asn Tyr Ala Val Glu Gly Glu Arg Cys Lys Lys  
1 5 10 15

<210> 9  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<400> 9  
Glu Ala Asn Tyr Glu Val Glu Phe  
1 5

<210> 10  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<400> 10  
Gly Val Leu Leu Ala Ala Gly Trp  
1 5

<210> 11  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<400> 11  
Ile Ile Lys Met Asp Asn Phe Gly  
1 5

<210> 12  
<211> 10  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<400> 12  
Asp Ser Ser Asn Leu Glu Met Thr His Ala  
1 5 10

<210> 13  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<220>  
<221> SITE  
<222> (7)  
<223> Xaa=cysteic acid

<400> 13  
Thr His Gly Phe Gln Leu Xaa His  
1 5

<210> 14

<211> 8  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: synthetic  
       peptide sequence  
  
 <400> 14  
 Cys Tyr Thr His Ser Phe Ser Pro  
   1                          5  
  
 <210> 15  
 <211> 8  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: synthetic  
       peptide sequence  
  
 <220>  
 <221> SITE  
 <222> (4)  
 <223> Xaa= any amino acid  
  
 <220>  
 <221> SITE  
 <222> (7)  
 <223> Xaa= any amino acid  
  
 <400> 15  
 Ser Thr Phe Xaa Gly Ser Xaa Gly  
   1                          5  
  
 <210> 16  
 <211> 8  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: synthetic  
       peptide sequence  
  
 <220>  
 <221> SITE  
 <222> (1)  
 <223> Xaa= any amino acid  
  
 <220>  
 <221> SITE  
 <222> (4)..(7)  
 <223> Xaa= any amino acid  
  
 <400> 16  
 Xaa Phe Ala Xaa Xaa Xaa Xaa Asn  
   1                          5  
  
 <210> 17  
 <211> 8



<212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: synthetic  
       peptide sequence  
  
 <220>  
 <221> SITE  
 <222> (1)..(2)  
 <223> Xaa=any amino acid  
  
 <220>  
 <221> SITE  
 <222> (4)..(7)  
 <223> Xaa= any amino acid  
  
 <400> 17  
 Xaa Xaa Gln Xaa Xaa Xaa Xaa Ser  
   1                  5  
  
 <210> 18  
 <211> 8  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: synthetic  
       peptide sequence  
  
 <220>  
 <221> SITE  
 <222> (1)..(2)  
 <223> Xaa= any amino acid  
  
 <220>  
 <221> SITE  
 <222> (4)..(7)  
 <223> Xaa= any amino acid  
  
 <400> 18  
 Xaa Xaa Glu Xaa Xaa Xaa Xaa Glu  
   1                  5  
  
 <210> 19  
 <211> 10  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: synthetic  
       peptide sequence  
  
 <400> 19  
 Ser Glu Val Asn Leu Asp Ala Glu Phe Arg  
   1                  5                  10  
  
 <210> 20  
 <211> 10  
 <212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic peptide sequence

<400> 20

Ser Glu Val Lys Met Asp Ala Glu Phe Arg  
1 5 10

<210> 21

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic peptide sequence

<220>

<221> MOD\_RES

<222> (5)

<223> Nle

<400> 21

Ser Glu Val Asn Xaa Asp Ala Glu Phe Arg  
1 5 10

<210> 22

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic peptide sequence

<400> 22

Gly Ser Glu Ser Met Asp Ser Gly Ile Ser Leu Asp Asn Lys Trp  
1 5 10 15

<210> 23

<211> 17

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic peptide sequence

<400> 23

Trp Lys Lys Gly Ala Ile Ile Gly Leu Met Val Gly Gly Val Val Lys  
1 5 10 15

Lys

<210> 24

<211> 11

<212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: synthetic  
           peptide sequence  
  
 <400> 24  
 Ala Asn Leu Ser Thr Phe Ala Gln Pro Arg Arg  
   1                  5                  10  
  
 <210> 25  
 <211> 20  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: synthetic  
           peptide sequence  
  
 <400> 25  
 Glu Phe Arg His Asp Ser Gly Tyr Glu Val His His Gln Lys Leu Val  
   1                  5                  10                  15  
  
 Phe Phe Ala Glu  
                   20  
  
 <210> 26  
 <211> 16  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: synthetic  
           peptide sequence  
  
 <400> 26  
 Leu Thr Gly Lys Thr Ile Thr Leu Glu Val Glu Pro Ser Asp Thr Ile  
   1                  5                  10                  15  
  
 <210> 27  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: synthetic  
           peptide sequence  
  
 <220>  
 <221> SITE  
 <222> (7)  
 <223> Xaa= cysteic acid  
  
 <220>  
 <221> SITE  
 <222> (19)  
 <223> Xaa = cysteic acid  
  
 <400> 27

Phe Val Asn Gln His Leu Xaa Gly Ser His Leu Val Glu Ala Leu Tyr  
 1 5 10 15  
 Leu Val Xaa Gly Glu Arg Gly Phe Phe Tyr Thr Pro Lys Ala  
 20 25 30

<210> 28  
 <211> 21  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: synthetic

<220>  
 <221> SITE  
 <222> (6)  
 <223> Xaa=cysteic acid

<220>  
 <221> SITE  
 <222> (7)  
 <223> Xaa=cysteic acid

<220>  
 <221> SITE  
 <222> (11)  
 <223> Xaa=cysteic acid

<220>  
 <221> SITE  
 <222> (20)  
 <223> Xaa=cysteic acid

<400> 28  
 Gly Ile Val Glu Gln Xaa Xaa Ala Ser Val Xaa Ser Leu Tyr Gln Leu  
 1 5 10 15  
 Glu Asn Tyr Xaa Asn  
 20

<210> 29  
 <211> 23  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: synthetic  
 peptide sequence

<400> 29  
 Tyr Arg Tyr Gln Ser His Asp Tyr Ala Phe Ser Ser Val Glu Lys Leu  
 1 5 10 15  
 Leu His Ala Leu Gly Gly Cys  
 20

<210> 30  
 <211> 23

<212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: synthetic  
           peptide sequence  
  
 <400> 30  
 Tyr Arg Tyr Gln Ser His Asp Tyr Ala Phe Ser Ser Val Glu Lys Leu  
       1                          5                          10                          15  
  
 Leu His Ala Leu Gly Gly Cys  
                           20

<210> 31  
 <211> 8  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: synthetic  
           peptide sequence

<400> 31  
 Leu Val Asn Met Ala Glu Gly Asp  
       1                          5

<210> 32  
 <211> 8  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: synthetic  
           peptide sequence

<400> 32  
 Arg Gly Ser Met Ala Gly Val Leu  
       1                          5

<210> 33  
 <211> 8  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: synthetic  
           peptide sequence

<400> 33  
 Gly Thr Gln His Gly Ile Arg Leu  
       1                          5

<210> 34  
 <211> 8  
 <212> PRT  
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic  
peptide sequence

<400> 34  
Ser Ser Asn Phe Ala Val Gly Ala  
1 5

<210> 35  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<400> 35  
Gly Leu Ala Tyr Ala Glu Ile Ala  
1 5

<210> 36  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<400> 36  
His Leu Cys Gly Ser His Leu Val  
1 5

<210> 37  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<400> 37  
Cys Gly Glu Arg Gly Phe Phe Tyr  
1 5

<210> 38  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<400> 38  
Gly Val Leu Leu Ser Arg Lys  
1 5

<210> 39  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<400> 39  
Val Gly Ser Gly Val Leu Leu  
1 5

<210> 40  
<211> 5  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<400> 40  
Val Gly Ser Gly Val  
1 5

<210> 41  
<211> 12  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<220>  
<221> SITE  
<222> (9)  
<223> Xaa= cysteic acid

<400> 41  
Lys Val Glu Ala Leu Tyr Leu Val Xaa Gly Glu Arg  
1 5 10

<210> 42  
<211> 15  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<400> 42  
Trp Arg Arg Val Glu Ala Leu Tyr Leu Val Glu Gly Glu Arg Lys  
1 5 10 15

<210> 43  
<211> 14

<212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: synthetic  
       peptide sequence  
  
 <400> 43  
 Lys Val Glu Ala Asn Tyr Leu Val Glu Gly Glu Arg Lys Lys  
       1                              5                              10  
  
 <210> 44  
 <211> 4  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: synthetic  
       peptide sequence  
  
 <400> 44  
 Met Leu Leu Leu  
       1  
  
 <210> 45  
 <211> 6  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: synthetic  
       peptide sequence  
  
 <400> 45  
 Asp Ala Ala His Pro Gly  
       1                              5  
  
 <210> 46  
 <211> 14  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: synthetic  
       peptide sequence  
  
 <400> 46  
 Lys Val Glu Ala Asn Tyr Asp Val Glu Gly Glu Arg Lys Lys  
       1                              5                              10  
  
 <210> 47  
 <211> 14  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: synthetic  
       peptide sequence



<400> 47  
Lys Val Glu Ala Asn Leu Ala Val Glu Gly Glu Arg Lys Lys  
1 5 10

<210> 48  
<211> 14  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<400> 48  
Lys Val Glu Ala Leu Tyr Ala Val Glu Gly Glu Arg Lys Lys  
1 5 10

<210> 49  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<220>  
<221> SITE  
<222> (1)  
<223> Xaa = E, G, I, D, T, cysteic acid or S

<400> 49  
Xaa Ala Asn Tyr Glu Val Glu Phe  
1 5

<210> 50  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<220>  
<221> SITE  
<222> (2)  
<223> Xaa= A, V, I, S, H, Y, T or F

<400> 50  
Glu Xaa Asn Tyr Glu Val Glu Phe  
1 5

<210> 51  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic peptide sequence

<220>

<221> SITE

<222> (3)

<223> Xaa= N, L, K, S, G, T, D, A, Q, or E

<400> 51

Glu Ala Xaa Tyr Glu Val Glu Phe

1

5

<210> 52

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic peptide sequence

<220>

<221> SITE

<222> (4)

<223> Xaa= Y, L, M, Nle, F or H

<400> 52

Glu Ala Asn Xaa Glu Val Glu Phe

1

5

<210> 53

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic peptide sequence

<220>

<221> SITE

<222> (5)

<223> Xaa= E, A, D, M, Q, S or G

<400> 53

Glu Ala Asn Tyr Xaa Val Glu Phe

1

5

<210> 54

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic peptide sequence

<220>

<221> SITE

<222> (6)

<223> Xaa= V, A, N, T, L, F or S

<400> 54

Glu Ala Asn Tyr Glu Xaa Glu Phe  
1 5

<210> 55

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic  
peptide sequence

<220>

<221> SITE

<222> (7)

<223> Xaa= E, G, F, H, cysteic acid or S

<400> 55

Glu Ala Asn Tyr Glu Val Xaa Phe  
1 5

<210> 56

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic  
peptide sequence

<220>

<221> SITE

<222> (8)

<223> Xaa= F, W, G, A, H, P, G, N, S or E

<400> 56

Glu Ala Asn Tyr Glu Val Glu Xaa  
1 5

<210> 57

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic  
peptide sequence

<220>

<221> SITE

<222> (1)

<223> Xaa= E, G, I, D, T, cyeteic acid or S

<400> 57

Xaa Val Leu Leu Ala Ala Gly Trp  
1 5

<210> 58  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<220>  
<221> SITE  
<222> (2)  
<223> Xaa= A, V, I, S, H, Y, T or F

<400> 58  
Gly Xaa Leu Leu Ala Ala Gly Trp  
1 5

<210> 59  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<220>  
<221> SITE  
<222> (3)  
<223> Xaa= N, L, K, S, G, T, D, A, Q or E

<400> 59  
Gly Val Xaa Leu Ala Ala Gly Trp  
1 5

<210> 60  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<220>  
<221> SITE  
<222> (4)  
<223> Xaa= Y, L, M, Nle, F or H

<400> 60  
Gly Val Leu Xaa Ala Ala Gly Trp  
1 5

<210> 61  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic peptide sequence

<220>

<221> SITE

<222> (5)

<223> Xaa= E, A, D, M, Q, S or G

<400> 61

Gly Val Leu Leu Xaa Ala Gly Trp  
1 5

<210> 62

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic peptide sequence

<220>

<221> SITE

<222> (6)

<223> Xaa= V, A, N, T, L, F or S

<400> 62

Gly Val Leu Leu Ala Xaa Gly Trp  
1 5

<210> 63

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic peptide sequence

<220>

<221> SITE

<222> (7)

<223> Xaa= E, G, F, H, cysteic acid or S

<400> 63

Gly Val Leu Leu Ala Ala Xaa Trp  
1 5

<210> 64

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic peptide sequence

<220>

<221> SITE

<222> (8)

<223> Xaa= F, W, G, A, H, P, G, N or S

<400> 64

Gly Val Leu Leu Ala Ala Gly Xaa  
1 5

<210> 65

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic  
peptide sequence

<220>

<221> SITE

<222> (1)

<223> Xaa= E, G, I, D, T, cysteic acid or S

<400> 65

Xaa Ile Lys Met Asp Asn Phe Gly  
1 5

<210> 66

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic  
peptide sequence

<220>

<221> SITE

<222> (2)

<223> Xaa= A, V, I, S, H, Y, T or F

<400> 66

Ile Xaa Lys Met Asp Asn Phe Gly  
1 5

<210> 67

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic  
peptide sequence

<220>

<221> SITE

<222> (3)

<223> Xaa= N, L, K, S, G, T, D, A, Q or E

<400> 67

Ile Ile Xaa Met Asp Asn Phe Gly  
1 5

<210> 68  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<220>  
<221> SITE  
<222> (4)  
<223> Xaa= Y, L, M, Nle, F or H

<400> 68  
Ile Ile Lys Xaa Asp Asn Phe Gly  
1 5

<210> 69  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<220>  
<221> SITE  
<222> (5)  
<223> Xaa= E, A, D, M, Q, S or G

<400> 69  
Ile Ile Lys Met Xaa Asn Phe Gly  
1 5

<210> 70  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<220>  
<221> SITE  
<222> (6)  
<223> Xaa= V, A, N,T, L, F or S

<400> 70  
Ile Ile Lys Met Asp Xaa Phe Gly  
1 5

<210> 71  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<220>  
<221> SITE  
<222> (7)  
<223> Xaa= E, G, F, H, cysteic acid or S

<400> 71  
Ile Ile Lys Met Asp Asn Xaa Gly  
1 5

<210> 72  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<220>  
<221> SITE  
<222> (8)  
<223> Xaa= F, W, G, A, H, P, G, N or S

<400> 72  
Ile Ile Lys Met Asp Asn Phe Xaa  
1 5

<210> 73  
<211> 10  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<220>  
<221> SITE  
<222> (1)  
<223> Xaa= E, G, I, D, T, cysteic acid or S

<400> 73  
Xaa Ser Ser Asn Leu Glu Met Thr His Ala  
1 5 10

<210> 74  
<211> 10  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<220>  
<221> SITE



<222> (2)  
 <223> Xaa= A, V, I, S, H, Y, T or F  
  
 <400> 74  
 Asp Xaa Ser Asn Leu Glu Met Thr His Ala  
   1                          5                          10  
  
 <210> 75  
 <211> 10  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: synthetic  
       peptide sequence  
  
 <220>  
 <221> SITE  
 <222> (3)  
 <223> Xaa= N, L, K, S, G, T, D, A, Q or E  
  
 <400> 75  
 Asp Ser Xaa Asn Leu Glu Met Thr His Ala  
   1                          5                          10  
  
 <210> 76  
 <211> 8  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: synthetic  
       peptide sequence  
  
 <220>  
 <221> SITE  
 <222> (4)  
 <223> Xaa= Y, L, M, Nle, F or H  
  
 <400> 76  
 Asp Ser Ser Xaa Met Thr His Ala  
   1                          5  
  
 <210> 77  
 <211> 10  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: synthetic  
       peptide sequence  
  
 <220>  
 <221> SITE  
 <222> (7)  
 <223> Xaa= E, A, D, M, Q, S or G  
  
 <400> 77  
 Asp Ser Ser Asn Leu Glu Xaa Thr His Ala  
   1                          5                          10

<210> 78  
 <211> 10  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: synthetic  
           peptide sequence  
  
 <220>  
 <221> SITE  
 <222> (8)  
 <223> Xaa= V, A, N, T, L, F or S  
  
 <400> 78  
 Asp Ser Ser Asn Leu Glu Met Xaa His Ala  
       1                  5                  10

<210> 79  
 <211> 9  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: synthetic  
           peptide sequence  
  
 <220>  
 <221> SITE  
 <222> (8)  
 <223> Xaa= E, G, F, H, cysteic acid or S  
  
 <400> 79  
 Asp Ser Asn Leu Glu Met Thr Xaa Ala  
       1                  5

<210> 80  
 <211> 9  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: synthetic  
           peptide sequence  
  
 <220>  
 <221> SITE  
 <222> (9)  
 <223> Xaa= F, W, G, A, H, P, G, N or S  
  
 <400> 80  
 Asp Ser Asn Leu Glu Met Thr His Xaa  
       1                  5

<210> 81  
 <211> 8  
 <212> PRT  
 <213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<220>  
<221> SITE  
<222> (1)  
<223> Xaa= E, G, I, D, T, cysteic acid or S

<220>  
<221> SITE  
<222> (7)  
<223> Xaa= cysteic acid

<400> 81  
Xaa His Gly Phe Gln Leu Xaa His  
1 5

<210> 82  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<220>  
<221> SITE  
<222> (2)  
<223> Xaa= A, V, I, S, H, Y, T or F

<220>  
<221> SITE  
<222> (7)  
<223> Xaa= cysteic acid

<400> 82  
Thr Xaa Gly Phe Gln Leu Xaa His  
1 5

<210> 83  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<220>  
<221> SITE  
<222> (3)  
<223> Xaa= N, L, K, S, G, T, D, A, Q or E

<220>  
<221> SITE  
<222> (7)  
<223> Xaa= cysteic acid

<400> 83

Thr His Xaa Phe Gln Leu Xaa His  
1 5

<210> 84  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<220>  
<221> SITE  
<222> (4)  
<223> Xaa= Y, L, M, Nle, F or H

<220>  
<221> SITE  
<222> (7)  
<223> Xaa= cysteic acid

<400> 84  
Thr His Gly Xaa Gln Leu Xaa His  
1 5

<210> 85  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<220>  
<221> SITE  
<222> (5)  
<223> Xaa= E, A, D, M, Q, S or G

<220>  
<221> SITE  
<222> (7)  
<223> Xaa= cysteic acid

<400> 85  
Thr His Gly Phe Xaa Leu Xaa His  
1 5

<210> 86  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<220>  
<221> SITE

<222> (6)  
 <223> Xaa= V, A, N, T, L, F or S  
  
 <220>  
 <221> SITE  
 <222> (7)  
 <223> Xaa= cysteic acid  
  
 <400> 86  
 Thr His Gly Phe Gln Xaa Xaa His  
     1                    5  
  
 <210> 87  
 <211> 8  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: synthetic  
       peptide sequence  
  
 <220>  
 <221> SITE  
 <222> (7)  
 <223> Xaa= E, G, F, H, cysteic acid or S  
  
 <400> 87  
 Thr His Gly Phe Gln Leu Xaa His  
     1                    5  
  
 <210> 88  
 <211> 8  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: synthetic  
       peptide sequence  
  
 <220>  
 <221> SITE  
 <222> (7)  
 <223> Xaa= cysteic acid  
  
 <220>  
 <221> SITE  
 <222> (8)  
 <223> Xaa= F, W, G, A, H, P, G, N or S  
  
 <400> 88  
 Thr His Gly Phe Gln Leu Xaa Xaa  
     1                    5  
  
 <210> 89  
 <211> 8  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: synthetic

peptide sequence

<220>  
<221> SITE  
<222> (1)  
<223> Xaa= E, G, I, D, T, cysteic acid or S

<400> 89  
Xaa Tyr Thr His Ser Phe Ser Pro  
1 5

<210> 90  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<220>  
<221> SITE  
<222> (1)  
<223> Xaa= cysteic acid

<220>  
<221> SITE  
<222> (2)  
<223> Xaa= A, V, I, S, H, Y, T or F

<400> 90  
Xaa Xaa Thr His Ser Phe Ser Pro  
1 5

<210> 91  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<220>  
<221> SITE  
<222> (1)  
<223> Xaa= cysteic acid

<220>  
<221> SITE  
<222> (3)  
<223> Xaa= N, L, K, S, G, T, D, A, Q or E

<400> 91  
Xaa Tyr Xaa His Ser Phe Ser Pro  
1 5

<210> 92  
<211> 8  
<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic peptide sequence

<220>

<221> SITE

<222> (1)

<223> Xaa= cysteic acid

<220>

<221> SITE

<222> (4)

<223> Xaa= Y, L, M, Nle, F or H

<400> 92

Xaa Tyr Thr Xaa Ser Phe Ser Pro  
1 5

<210> 93

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic peptide sequence

<220>

<221> SITE

<222> (1)

<223> Xaa= cysteic acid

<220>

<221> SITE

<222> (5)

<223> Xaa= E, A, D, M, Q, S or G

<400> 93

Xaa Tyr Thr His Xaa Phe Ser Pro  
1 5

<210> 94

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic peptide sequence

<220>

<221> SITE

<222> (1)

<223> Xaa= cysteic acid

<220>

<221> SITE

<222> (6)

<223> Xaa= V, A, N, T, L, F or S

<400> 94  
Xaa Tyr Thr His Ser Xaa Ser Pro  
1 5

<210> 95  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<220>  
<221> SITE  
<222> (1)  
<223> Xaa= cysteic acid

<220>  
<221> SITE  
<222> (7)  
<223> Xaa=E, G, F, H, cysteic acid or S

<400> 95  
Xaa Tyr Thr His Ser Phe Xaa Pro  
1 5

<210> 96  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<220>  
<221> SITE  
<222> (1)  
<223> Xaa=cysteic acid

<220>  
<221> SITE  
<222> (8)  
<223> Xaa= F, W, G, A, H, P, G, N or S

<400> 96  
Xaa Tyr Thr His Ser Phe Ser Xaa  
1 5

<210> 97  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<220>



<221> SITE  
 <222> (1)  
 <223> Xaa= E, G, I, D, T, cysteic acid or S  
  
 <220>  
 <221> SITE  
 <222> (7)  
 <223> Xaa= any amino acid  
  
 <220>  
 <221> SITE  
 <222> (4)  
 <223> Xaa= any amino acid  
  
 <400> 97  
 Xaa Thr Asp Xaa Gly Ser Xaa Gly  
   1                  5  
  
 <210> 98  
 <211> 8  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: synthetic  
       peptide sequence  
  
 <220>  
 <221> SITE  
 <222> (2)  
 <223> Xaa=A, V, I, S, H, Y, T or F  
  
 <220>  
 <221> SITE  
 <222> (4)  
 <223> Xaa= any amino acid  
  
 <220>  
 <221> SITE  
 <222> (7)  
 <223> Xaa= any amino acid  
  
 <400> 98  
 Ser Xaa Asp Xaa Gly Ser Xaa Gly  
   1                  5  
  
 <210> 99  
 <211> 8  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: synthetic  
       peptide sequence  
  
 <220>  
 <221> SITE  
 <222> (3)  
 <223> Xaa= N, L, K, S, G, T, D, A, Q or E  
  
 <220>

<221> SITE  
 <222> (4)  
 <223> Xaa= any amino acid  
  
 <220>  
 <221> SITE  
 <222> (7)  
 <223> Xaa= any amino acid  
  
 <400> 99  
 Ser Thr Xaa Xaa Gly Ser Xaa Gly  
   1                  5  
  
 <210> 100  
 <211> 8  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: synthetic  
       peptide sequence  
  
 <220>  
 <221> SITE  
 <222> (4)  
 <223> Xaa= Y, L, M, Nle, F or H  
  
 <220>  
 <221> SITE  
 <222> (7)  
 <223> Xaa= any amino acid  
  
 <400> 100  
 Ser Thr Asp Xaa Gly Ser Xaa Gly  
   1                  5  
  
 <210> 101  
 <211> 8  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: synthetic  
       peptide sequence  
  
 <220>  
 <221> SITE  
 <222> (4)  
 <223> Xaa= any amino acid  
  
 <220>  
 <221> SITE  
 <222> (7)  
 <223> Xaa= any amino acid  
  
 <220>  
 <221> SITE  
 <222> (5)  
 <223> Xaa= E, A, D, M, Q, S or G  
  
 <400> 101

Ser Thr Asp Xaa Xaa Ser Xaa Gly  
1 5

<210> 102

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic  
peptide sequence

<220>

<221> SITE

<222> (4)

<223> Xaa= any amino acid

<220>

<221> SITE

<222> (7)

<223> Xaa= any amino acid

<220>

<221> SITE

<222> (6)

<223> Xaa= V, A, N, T, L, F or S

<400> 102

Ser Thr Asp Xaa Gly Xaa Xaa Gly  
1 5

<210> 103

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic  
peptide sequence

<220>

<221> SITE

<222> (4)

<223> Xaa= any amino acid

<220>

<221> SITE

<222> (7)

<223> Xaa= E, G, F, H, cysteic acid or S

<400> 103

Ser Thr Asp Xaa Gly Ser Xaa Gly  
1 5

<210> 104

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic peptide sequence

<220>

<221> SITE

<222> (4)

<223> Xaa= any amino acid

<220>

<221> SITE

<222> (7)

<223> Xaa= any amino acid

<220>

<221> SITE

<222> (8)

<223> Xaa= F, W, G, A, H, P, G, N or S

<400> 104

Ser Thr Asp Xaa Gly Ser Xaa Xaa  
1 5

<210> 105

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic peptide sequence

<220>

<221> SITE

<222> (1)

<223> Xaa= E, G, I, D, T, cysteic acid or S

<220>

<221> SITE

<222> (4)..(7)

<223> Xaa= any amino acid

<400> 105

Xaa Phe Ala Xaa Xaa Xaa Xaa Asn  
1 5

<210> 106

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic peptide sequence

<220>

<221> SITE

<222> (1)

<223> Xaa= any amino acid

<220>

<221> SITE  
 <222> (2)  
 <223> Xaa= A, V, I, S, H, Y, T or F  
  
 <220>  
 <221> SITE  
 <222> (4)..(7)  
 <223> Xaa= any amino acid  
  
 <400> 106  
 Xaa Xaa Ala Xaa Xaa Xaa Xaa Asn  
   1                  5  
  
 <210> 107  
 <211> 8  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: synthetic  
       peptide sequence  
  
 <220>  
 <221> SITE  
 <222> (1)  
 <223> Xaa= any amino acid  
  
 <220>  
 <221> SITE  
 <222> (3)  
 <223> Xaa= N, L, K, S, G, T, D, A, Q or E  
  
 <220>  
 <221> SITE  
 <222> (4)..(7)  
 <223> Xaa= any amino acid  
  
 <400> 107  
 Xaa Phe Xaa Xaa Xaa Xaa Xaa Asn  
   1                  5  
  
 <210> 108  
 <211> 8  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: synthetic  
       peptide sequence  
  
 <220>  
 <221> SITE  
 <222> (1)  
 <223> Xaa= any amino acid  
  
 <220>  
 <221> SITE  
 <222> (4)  
 <223> Xaa= Y, L, M, Nle, F or H  
  
 <220>

<221> SITE  
 <222> (5)..(7)  
 <223> Xaa= any amino acid  
  
 <400> 108  
 Xaa Phe Ala Xaa Xaa Xaa Xaa Asn  
     1                    5  
  
 <210> 109  
 <211> 8  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: synthetic  
       peptide sequence  
  
 <220>  
 <221> SITE  
 <222> (1)  
 <223> Xaa= any amino acid  
  
 <220>  
 <221> SITE  
 <222> (4)  
 <223> Xaa = any amino acid  
  
 <220>  
 <221> SITE  
 <222> (5)  
 <223> Xaa= E, A, D, M, Q, S or G  
  
 <220>  
 <221> SITE  
 <222> (6)..(7)  
 <223> Xaa= any amino acid  
  
 <400> 109  
 Xaa Phe Ala Xaa Xaa Xaa Xaa Asn  
     1                    5  
  
 <210> 110  
 <211> 8  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: synthetic  
       peptide sequence  
  
 <220>  
 <221> SITE  
 <222> (1)  
 <223> Xaa= any amino acid  
  
 <220>  
 <221> SITE  
 <222> (4)..(5)  
 <223> Xaa= any amino acid  
  
 <220>

<221> SITE  
 <222> (6)  
 <223> Xaa= V, A, N, T, L, F or S  
  
 <220>  
 <221> SITE  
 <222> (7)  
 <223> Xaa= any amino acid  
  
 <400> 110  
 Xaa Phe Ala Xaa Xaa Xaa Xaa Asn  
   1                  5  
  
 <210> 111  
 <211> 8  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: synthetic  
       peptide sequence  
  
 <220>  
 <221> SITE  
 <222> (1)  
 <223> Xaa= any amino acid  
  
 <220>  
 <221> SITE  
 <222> (4)..(6)  
 <223> Xaa= any amino acid  
  
 <220>  
 <221> SITE  
 <222> (7)  
 <223> Xaa= E, G, F, H, cysteic acid or S  
  
 <400> 111  
 Xaa Phe Ala Xaa Xaa Xaa Xaa Asn  
   1                  5  
  
 <210> 112  
 <211> 8  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: synthetic  
       peptide sequence  
  
 <220>  
 <221> SITE  
 <222> (1)  
 <223> Xaa= any amino acid  
  
 <220>  
 <221> SITE  
 <222> (4)..(7)  
 <223> Xaa= any amino acid  
  
 <220>

<221> SITE  
 <222> (8)  
 <223> Xaa= F, W, G, A, H, P, G, N or S  
  
 <400> 112  
 Xaa Phe Ala Xaa Xaa Xaa Xaa Xaa  
     1                    5  
  
 <210> 113  
 <211> 9  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: synthetic  
         peptide sequence  
  
 <400> 113  
 Glu Val Asn Leu Asp Ala Glu Phe Arg  
     1                    5  
  
 <210> 114  
 <211> 7  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: synthetic  
         peptide sequence  
  
 <400> 114  
 Asp Tyr Lys Asp Asp Asp Lys  
     1                    5  
  
 <210> 115  
 <211> 17  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: synthetic  
         peptide sequence  
  
 <400> 115  
 Ala Cys Gly Ser Glu Ser Met Asp Ser Gly Ile Ser Leu Asp Asn Lys  
     1                    5                    10                    15  
 Trp  
  
 <210> 116  
 <211> 17  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: synthetic  
         peptide sequence



<400> 116

Trp Lys Lys Gly Ala Ile Ile Gly Leu Met Val Gly Gly Val Val Lys  
1 5 10 15

Lys

<210> 117

<211> 11

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic  
peptide sequence

<400> 117

Ala Asn Leu Ser Thr Phe Ala Gln Pro Arg Arg  
1 5 10

<210> 118

<211> 22

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic  
peptide sequence

<400> 118

Tyr Arg Tyr Gln Ser His Asp Tyr Ala Phe Ser Ser Val Glu Lys Leu  
1 5 10 15

Leu His Leu Gly Gly Cys  
20

<210> 119

<211> 22

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic  
peptide sequence

<400> 119

Tyr Arg Tyr Gln Ser His Asp Tyr Ala Phe Ser Ser Val Glu Lys Leu  
1 5 10 15

Leu His Leu Gly Gly Cys  
20

<210> 120

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic

peptide sequence

<400> 120

Lys Thr Ile Thr Leu Glu Val Glu Pro Ser  
1 5 10

<210> 121

<211> 12

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic  
peptide sequence

<220>

<221> SITE

<222> (9)

<223> Xaa= cysteic acid

<400> 121

Val Glu Ala Leu Tyr Leu Val Cys Xaa Gly Glu Arg  
1 5 10

<210> 122

<211> 11

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic  
peptide sequence

<400> 122

Val Glu Ala Leu Tyr Leu Val Glu Gly Glu Arg  
1 5 10

<210> 123

<211> 363

<212> PRT

<213> Homo sapiens

<220>

<223> galactosyltransferase

<400> 123

Met Ala Ser Lys Ser Trp Leu Asn Phe Leu Thr Phe Leu Cys Gly Ser  
1 5 10 15

Ala Ile Gly Phe Leu Leu Cys Ser Gln Leu Phe Ser Ile Leu Leu Gly  
20 25 30

Glu Lys Val Asp Thr Gln Pro Asn Val Leu His Asn Asp Pro His Ala  
35 40 45

Arg His Ser Asp Asp Asn Gly Gln Asn His Leu Glu Gly Gln Met Asn  
50 55 60

Phe Asn Ala Asp Ser Ser Gln His Lys Asp Glu Asn Thr Asp Ile Ala  
65 70 75 80

Glu Asn Leu Tyr Gln Lys Val Arg Ile Leu Cys Trp Val Met Thr Gly  
                     85                    90                    95  
 Pro Gln Asn Leu Glu Lys Lys Ala Lys His Val Lys Ala Thr Trp Ala  
                     100                    105                    110  
 Gln Arg Cys Asn Lys Val Leu Phe Met Ser Ser Glu Glu Asn Lys Asp  
                     115                    120                    125  
 Phe Pro Ala Val Gly Leu Lys Thr Lys Glu Gly Arg Asp Gln Leu Tyr  
                     130                    135                    140  
 Trp Lys Thr Ile Lys Ala Phe Gln Tyr Val His Glu His Tyr Leu Glu  
                     145                    150                    155                    160  
 Asp Ala Asp Trp Phe Leu Lys Ala Asp Asp Asp Thr Tyr Val Ile Leu  
                     165                    170                    175  
 Asp Asn Leu Arg Trp Leu Leu Ser Lys Tyr Asp Pro Glu Glu Pro Ile  
                     180                    185                    190  
 Tyr Phe Gly Arg Arg Phe Lys Pro Tyr Val Lys Gln Gly Tyr Met Ser  
                     195                    200                    205  
 Gly Gly Ala Gly Tyr Val Leu Ser Lys Glu Ala Leu Lys Arg Phe Val  
                     210                    215                    220  
 Asp Ala Phe Lys Thr Asp Lys Cys Thr His Ser Ser Ser Ile Glu Asp  
                     225                    230                    235                    240  
 Leu Ala Leu Gly Arg Cys Met Glu Ile Met Asn Val Glu Ala Gly Asp  
                     245                    250                    255  
 Ser Arg Asp Thr Ile Gly Lys Glu Thr Phe His Pro Phe Val Pro Glu  
                     260                    265                    270  
 His His Leu Ile Lys Gly Tyr Leu Pro Arg Thr Phe Trp Tyr Trp Asn  
                     275                    280                    285  
 Tyr Asn Tyr Tyr Pro Pro Val Glu Gly Pro Gly Cys Cys Ser Asp Leu  
                     290                    295                    300  
 Ala Val Ser Phe His Tyr Val Asp Ser Thr Thr Met Tyr Glu Leu Glu  
                     305                    310                    315                    320  
 Tyr Leu Val Tyr His Leu Arg Pro Tyr Gly Tyr Leu Tyr Arg Tyr Gln  
                     325                    330                    335  
 Pro Thr Leu Pro Glu Arg Ile Leu Lys Glu Ile Ser Gln Ala Asn Lys  
                     340                    345                    350  
 Asn Glu Asp Thr Lys Val Lys Leu Gly Asn Pro  
                     355                    360

<210> 124

<211> 405

<212> PRT

<213> Homo sapiens

<220>

<223> Homo sapiens sialyltransferase 1

<400> 124

Ile	His	Thr	Asn	Leu	Lys	Lys	Lys	Phe	Ser	Cys	Cys	Val	Leu	Val	Phe
1				5					10					15	
Leu	Leu	Phe	Ala	Val	Ile	Cys	Val	Trp	Lys	Glu	Lys	Lys	Lys	Gly	Ser
			20					25					30		
Tyr	Tyr	Asp	Ser	Phe	Lys	Leu	Gln	Thr	Lys	Glu	Phe	Gln	Val	Leu	Lys
		35					40					45			
Ser	Leu	Gly	Lys	Leu	Ala	Met	Gly	Ser	Asp	Ser	Gln	Ser	Val	Ser	Ser
	50					55					60				
Ser	Ser	Thr	Gln	Asp	Pro	His	Arg	Gly	Arg	Gln	Thr	Leu	Gly	Ser	Leu
65					70					75					80
Arg	Gly	Leu	Ala	Lys	Ala	Lys	Pro	Glu	Ala	Ser	Phe	Gln	Val	Trp	Asn
				85					90					95	
Lys	Asp	Ser	Ser	Ser	Lys	Asn	Leu	Ile	Pro	Arg	Leu	Gln	Lys	Ile	Trp
			100					105					110		
Lys	Asn	Tyr	Leu	Ser	Met	Asn	Lys	Tyr	Lys	Val	Ser	Tyr	Lys	Gly	Pro
		115					120					125			
Gly	Pro	Gly	Ile	Lys	Phe	Ser	Ala	Glu	Ala	Leu	Arg	Cys	His	Leu	Arg
	130					135					140				
Asp	His	Val	Asn	Val	Ser	Met	Val	Glu	Val	Thr	Asp	Phe	Pro	Phe	Asn
145					150					155					160
Thr	Ser	Glu	Trp	Glu	Gly	Tyr	Leu	Pro	Lys	Glu	Ser	Ile	Arg	Thr	Lys
				165					170					175	
Ala	Gly	Pro	Trp	Gly	Arg	Cys	Ala	Val	Val	Ser	Ser	Ala	Gly	Ser	Leu
			180					185					190		
Lys	Ser	Ser	Gln	Leu	Gly	Arg	Glu	Ile	Asp	Asp	His	Asp	Ala	Val	Leu
		195					200					205			
Arg	Phe	Asn	Gly	Ala	Pro	Thr	Ala	Asn	Phe	Gln	Gln	Asp	Val	Gly	Thr
	210					215						220			
Lys	Thr	Thr	Ile	Arg	Leu	Met	Asn	Ser	Gln	Leu	Val	Thr	Thr	Glu	Lys
225					230					235					240
Arg	Phe	Leu	Lys	Asp	Ser	Leu	Tyr	Asn	Glu	Gly	Ile	Leu	Ile	Val	Trp
			245						250					255	
Asp	Pro	Ser	Val	Tyr	His	Ser	Asp	Ile	Pro	Lys	Trp	Tyr	Gln	Asn	Pro
			260					265					270		
Asp	Tyr	Asn	Phe	Phe	Asn	Asn	Tyr	Lys	Thr	Tyr	Arg	Lys	Leu	His	Pro
		275					280					285			
Asn	Gln	Pro	Phe	Tyr	Ile	Leu	Lys	Pro	Gln	Met	Pro	Trp	Glu	Leu	Trp
		290				295					300				
Asp	Ile	Leu	Gln	Glu	Ile	Ser	Pro	Glu	Glu	Ile	Gln	Pro	Asn	Pro	Pro
305					310					315					320
Ser	Ser	Gly	Met	Leu	Gly	Ile	Ile	Ile	Met	Met	Thr	Leu	Cys	Asp	Gln
			325						330					335	

Val Asp Ile Tyr Glu Phe Leu Pro Ser Lys Arg Lys Thr Asp Val Cys  
340 345 350

Tyr Tyr Tyr Gln Lys Phe Phe Asp Ser Ala Cys Thr Met Gly Ala Tyr  
355 360 365

His Pro Leu Leu Tyr Glu Lys Asn Leu Val Lys His Leu Asn Gln Gly  
370 375 380

Thr Asp Glu Asp Ile Tyr Leu Leu Gly Lys Ala Thr Leu Pro Gly Phe  
385 390 395 400

Arg Thr Ile His Cys  
405

<210> 125  
<211> 518  
<212> PRT  
<213> Homo sapiens

<220>  
<223> Homo sapiens aspartyl protease 1

<400> 125  
Met Gly Ala Leu Ala Arg Ala Leu Leu Leu Pro Leu Leu Ala Gln Trp  
1 5 10 15

Leu Leu Arg Ala Ala Pro Glu Leu Ala Pro Ala Pro Phe Thr Leu Pro  
20 25 30

Leu Arg Val Ala Ala Ala Thr Asn Arg Val Val Ala Pro Thr Pro Gly  
35 40 45

Pro Gly Thr Pro Ala Glu Arg His Ala Asp Gly Leu Ala Leu Ala Leu  
50 55 60

Glu Pro Ala Leu Ala Ser Pro Ala Gly Ala Ala Asn Phe Leu Ala Met  
65 70 75 80

Val Asp Asn Leu Gln Gly Asp Ser Gly Arg Gly Tyr Tyr Leu Glu Met  
85 90 95

Leu Ile Gly Thr Pro Pro Gln Lys Leu Gln Ile Leu Val Asp Thr Gly  
100 105 110

Ser Ser Asn Phe Ala Val Ala Gly Thr Pro His Ser Tyr Ile Asp Thr  
115 120 125

Tyr Phe Asp Thr Glu Arg Ser Ser Thr Tyr Arg Ser Lys Gly Phe Asp  
130 135 140

Val Thr Val Lys Tyr Thr Gln Gly Ser Trp Thr Gly Phe Val Gly Glu  
145 150 155 160

Asp Leu Val Thr Ile Pro Lys Gly Phe Asn Thr Ser Phe Leu Val Asn  
165 170 175

Ile Ala Thr Ile Phe Glu Ser Glu Asn Phe Phe Leu Pro Gly Ile Lys  
180 185 190

Trp Asn Gly Ile Leu Gly Leu Ala Tyr Ala Thr Leu Ala Lys Pro Ser  
195 200 205

Ser Ser Leu Glu Thr Phe Phe Asp Ser Leu Val Thr Gln Ala Asn Ile  
 210 215 220  
 Pro Asn Val Phe Ser Met Gln Met Cys Gly Ala Gly Leu Pro Val Ala  
 225 230 235 240  
 Gly Ser Gly Thr Asn Gly Gly Ser Leu Val Leu Gly Gly Ile Glu Pro  
 245 250 255  
 Ser Leu Tyr Lys Gly Asp Ile Trp Tyr Thr Pro Ile Lys Glu Glu Trp  
 260 265 270  
 Tyr Tyr Gln Ile Glu Ile Leu Lys Leu Glu Ile Gly Gly Gln Ser Leu  
 275 280 285  
 Asn Leu Asp Cys Arg Glu Tyr Asn Ala Asp Lys Ala Ile Val Asp Ser  
 290 295 300  
 Gly Thr Thr Leu Leu Arg Leu Pro Gln Lys Val Phe Asp Ala Val Val  
 305 310 315 320  
 Glu Ala Val Ala Arg Ala Ser Leu Ile Pro Glu Phe Ser Asp Gly Phe  
 325 330 335  
 Trp Thr Gly Ser Gln Leu Ala Cys Trp Thr Asn Ser Glu Thr Pro Trp  
 340 345 350  
 Ser Tyr Phe Pro Lys Ile Ser Ile Tyr Leu Arg Asp Glu Asn Ser Ser  
 355 360 365  
 Arg Ser Phe Arg Ile Thr Ile Leu Pro Gln Leu Tyr Ile Gln Pro Met  
 370 375 380  
 Met Gly Ala Gly Leu Asn Tyr Glu Cys Tyr Arg Phe Gly Ile Ser Pro  
 385 390 395 400  
 Ser Thr Asn Ala Leu Val Ile Gly Ala Thr Val Met Glu Gly Phe Tyr  
 405 410 415  
 Val Ile Phe Asp Arg Ala Gln Lys Arg Val Gly Phe Ala Ala Ser Pro  
 420 425 430  
 Cys Ala Glu Ile Ala Gly Ala Ala Val Ser Glu Ile Ser Gly Pro Phe  
 435 440 445  
 Ser Thr Glu Asp Val Ala Ser Asn Cys Val Pro Ala Gln Ser Leu Ser  
 450 455 460  
 Glu Pro Ile Leu Trp Ile Val Ser Tyr Ala Leu Met Ser Val Cys Gly  
 465 470 475 480  
 Ala Ile Leu Leu Val Leu Ile Val Leu Leu Leu Pro Phe Arg Cys  
 485 490 495  
 Gln Arg Arg Pro Arg Asp Pro Glu Val Val Asn Asp Glu Ser Ser Leu  
 500 505 510  
 Val Arg His Arg Trp Lys  
 515

<210> 126

<211> 255  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <223> Homo sapiens syntaxin 6

<400> 126  
 Met Ser Met Glu Asp Pro Phe Phe Val Val Lys Gly Glu Val Gln Lys  
           1                  5                  10                  15  
 Ala Val Asn Thr Ala Gln Gly Leu Phe Gln Arg Trp Thr Glu Leu Leu  
                   20                  25                  30  
 Gln Asp Pro Ser Thr Ala Thr Arg Glu Glu Ile Asp Trp Thr Thr Asn  
                   35                  40                  45  
 Glu Leu Arg Asn Asn Leu Arg Ser Ile Glu Trp Asp Leu Glu Asp Leu  
           50                  55                  60  
 Asp Glu Thr Ile Ser Ile Val Glu Ala Asn Pro Arg Lys Phe Asn Leu  
           65                  70                  75                  80  
 Asp Ala Thr Glu Leu Ser Ile Arg Lys Ala Phe Ile Thr Ser Thr Arg  
                   85                  90                  95  
 Gln Val Val Arg Asp Met Lys Asp Gln Met Ser Thr Ser Ser Val Gln  
                   100                  105                  110  
 Ala Leu Ala Glu Arg Lys Asn Arg Gln Ala Leu Leu Gly Asp Ser Gly  
           115                  120                  125  
 Ser Gln Asn Trp Ser Thr Gly Thr Thr Asp Lys Tyr Gly Arg Leu Asp  
           130                  135                  140  
 Arg Glu Leu Gln Arg Ala Asn Ser His Phe Ile Glu Glu Gln Gln Ala  
           145                  150                  155                  160  
 Gln Gln Gln Leu Ile Val Glu Gln Gln Asp Glu Gln Leu Glu Leu Val  
                   165                  170                  175  
 Ser Gly Ser Ile Gly Val Leu Lys Asn Met Ser Gln Arg Ile Gly Gly  
                   180                  185                  190  
 Glu Leu Glu Glu Gln Ala Val Met Leu Glu Asp Phe Ser His Glu Leu  
           195                  200                  205  
 Glu Ser Thr Gln Ser Arg Leu Asp Asn Val Met Lys Lys Leu Ala Lys  
           210                  215                  220  
 Val Ser His Met Thr Ser Asp Arg Arg Gln Trp Cys Ala Ile Ala Ile  
           225                  230                  235                  240  
 Leu Phe Ala Val Leu Leu Val Val Leu Ile Leu Phe Leu Val Leu  
                   245                  250                  255

<210> 127  
 <211> 1728  
 <212> DNA  
 <213> Artificial Sequence  
 <220>

<223> Description of Artificial Sequence: nucleic acid  
encoding recombinant fusion protein

<400> 127

```

atgctgctgc tgctgctgct gctgggcctg aggctacagc tctccctggg catcatccca 60
gttgaggagg agaaccggga cttctggaac cgcgaggcag ccgaggccct ggggtgccgc 120
aagaagctgc agcctgcaca gacagccgcc aagaacctca tcatcttctt gggc gatggg 180
atgggggtgt ctacgggtgac agctgccagg atcctaaaag ggcagaagaa ggacaaactg 240
gggcctgaga tacccttggc catggaccgc tcccatatg tggctctgtc caagacatac 300
aatgtagaca aacatgtgcc agacagtggg gccacagcca cggcctacct gtgcgggggtc 360
aagggcaact tccagaccat tggcttgagt gcagccgccc gctttaacca gtgcaacacg 420
acacgcggca acgaggtcat ctccgtgatg aatcgggcca agaaagcagg gaagtcagt 480
ggagtggtaa ccaccacacg agtgcagcac gcctcgccag ccggcaccta cgcccacacg 540
gtgaaccgca actggtactc ggacgccgac gtgcctgcct cggcccggca ggagggtgc 600
caggacatcg ctacgcagct catctccaac atggacattg acgtgatcct aggtggaggc 660
cgaaagtaca tgtttcccat gggaacccca gacctgagt acccagatga ctacagccaa 720
gggtgggacca ggctggacgg gaagaatctg gtgcaggaat ggctggcgaa gcgccagggt 780
gcccggtatg tgtggaaccg cactgagctc atgcaggctt ccctggaccc gtctgtgacc 840
catctcatgg gtctctttga gcctggagac atgaaatacg agatccaccg agactccaca 900
ctggaccctt cctgatgga gatgacagag gctgccctgc gcctgctgag caggaaaccc 960
cgcggttctt tctcttctgt ggaggggtgt cgcacgcacc atgggtcatca tgaaagcagg 1020
gcttaccggg cactgactga gacgatcatg ttcgacgacg ccattgagag ggcggggccag 1080
ctcaccagcg aggaggacac gctgagcctc gtcactgccg accactccca cgtcttctcc 1140
ttcggagggt accccttgcg agggagctcc atcttcgggc tggcccttgg caaggcccgg 1200
gacaggaagg cctacacggg cctcctatac ggaaacgggc caggctatgt gctcaaggac 1260
ggcgcccggc cggatgttac cgagagcgag agcgggagcc ccgagtatcg gcagcagtc 1320
gcagtgcgcc tggacgaaga gacccacgca ggcgaggacg tggcggtgtt cgcgcgcggc 1380
ccgcaggcgc acctggttca cggcgtgcag gagcagacct tcatagcgca cgtcatggcc 1440
ttcgccgctt gcctggagcc ctacaccgcc tgcgacctgg cggcccccg cggcaccacc 1500
gacgcccgcg acccaggtaa ctatgaagtt gaattccgaa gagcactcta cgtagagggt 1560
gaaagaggat tcttctacac tccaaaggca ctctacctcg tagagggtga aagaggattc 1620
ttctacacta gtctcatgac catagcctat gtcattggct ccatctgcgc cctcttcatg 1680
ctgccactct gcctcatggt ggactacaag gatgatgatg acaagtag 1728

```

<210> 128

<211> 575

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: recombinant  
fusion protein sequence

<400> 128

```

Met Leu Leu Leu Leu Leu Leu Leu Gly Leu Arg Leu Gln Leu Ser Leu
  1                      5                      10                     15

Gly Ile Ile Pro Val Glu Glu Glu Asn Pro Asp Phe Trp Asn Arg Glu
 20                      25                     30

Ala Ala Glu Ala Leu Gly Ala Ala Lys Lys Leu Gln Pro Ala Gln Thr
 35                      40                     45

Ala Ala Lys Asn Leu Ile Ile Phe Leu Gly Asp Gly Met Gly Val Ser
 50                      55                     60

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Lys Lys Asp Lys Leu
 65                      70                     75                     80

Gly Pro Glu Ile Pro Leu Ala Met Asp Arg Phe Pro Tyr Val Ala Leu
 85                      90                     95

Ser Lys Thr Tyr Asn Val Asp Lys His Val Pro Asp Ser Gly Ala Thr

```



100					105					110					
Ala	Thr	Ala	Tyr	Leu	Cys	Gly	Val	Lys	Gly	Asn	Phe	Gln	Thr	Ile	Gly
		115					120					125			
Leu	Ser	Ala	Ala	Ala	Arg	Phe	Asn	Gln	Cys	Asn	Thr	Thr	Arg	Gly	Asn
		130				135					140				
Glu	Val	Ile	Ser	Val	Met	Asn	Arg	Ala	Lys	Lys	Ala	Gly	Lys	Ser	Val
		145				150					155				160
Gly	Val	Val	Thr	Thr	Thr	Arg	Val	Gln	His	Ala	Ser	Pro	Ala	Gly	Thr
				165					170					175	
Tyr	Ala	His	Thr	Val	Asn	Arg	Asn	Trp	Tyr	Ser	Asp	Ala	Asp	Val	Pro
			180					185					190		
Ala	Ser	Ala	Arg	Gln	Glu	Gly	Cys	Gln	Asp	Ile	Ala	Thr	Gln	Leu	Ile
		195					200					205			
Ser	Asn	Met	Asp	Ile	Asp	Val	Ile	Leu	Gly	Gly	Gly	Arg	Lys	Tyr	Met
		210				215					220				
Phe	Pro	Met	Gly	Thr	Pro	Asp	Pro	Glu	Tyr	Pro	Asp	Asp	Tyr	Ser	Gln
				230						235					240
Gly	Gly	Thr	Arg	Leu	Asp	Gly	Lys	Asn	Leu	Val	Gln	Glu	Trp	Leu	Ala
				245					250					255	
Lys	Arg	Gln	Gly	Ala	Arg	Tyr	Val	Trp	Asn	Arg	Thr	Glu	Leu	Met	Gln
			260					265					270		
Ala	Ser	Leu	Asp	Pro	Ser	Val	Thr	His	Leu	Met	Gly	Leu	Phe	Glu	Pro
		275					280					285			
Gly	Asp	Met	Lys	Tyr	Glu	Ile	His	Arg	Asp	Ser	Thr	Leu	Asp	Pro	Ser
		290				295					300				
Leu	Met	Glu	Met	Thr	Glu	Ala	Ala	Leu	Arg	Leu	Leu	Ser	Arg	Asn	Pro
				310						315					320
Arg	Gly	Phe	Phe	Leu	Phe	Val	Glu	Gly	Gly	Arg	Ile	Asp	His	Gly	His
				325					330					335	
His	Glu	Ser	Arg	Ala	Tyr	Arg	Ala	Leu	Thr	Glu	Thr	Ile	Met	Phe	Asp
			340					345					350		
Asp	Ala	Ile	Glu	Arg	Ala	Gly	Gln	Leu	Thr	Ser	Glu	Glu	Asp	Thr	Leu
		355.					360					365			
Ser	Leu	Val	Thr	Ala	Asp	His	Ser	His	Val	Phe	Ser	Phe	Gly	Gly	Tyr
		370				375					380				
Pro	Leu	Arg	Gly	Ser	Ser	Ile	Phe	Gly	Leu	Ala	Pro	Gly	Lys	Ala	Arg
				390						395					400
Asp	Arg	Lys	Ala	Tyr	Thr	Val	Leu	Leu	Tyr	Gly	Asn	Gly	Pro	Gly	Tyr
				405					410					415	
Val	Leu	Lys	Asp	Gly	Ala	Arg	Pro	Asp	Val	Thr	Glu	Ser	Glu	Ser	Gly
			420					425					430		

Ser	Pro	Glu	Tyr	Arg	Gln	Gln	Ser	Ala	Val	Pro	Leu	Asp	Glu	Glu	Thr	435	440	445	
His	Ala	Gly	Glu	Asp	Val	Ala	Val	Phe	Ala	Arg	Gly	Pro	Gln	Ala	His	450	455	460	
Leu	Val	His	Gly	Val	Gln	Glu	Gln	Thr	Phe	Ile	Ala	His	Val	Met	Ala	465	470	475	480
Phe	Ala	Ala	Cys	Leu	Glu	Pro	Tyr	Thr	Ala	Cys	Asp	Leu	Ala	Pro	Pro	485	490	495	
Ala	Gly	Thr	Thr	Asp	Ala	Ala	His	Pro	Gly	Asn	Tyr	Glu	Val	Glu	Pro	500	505	510	
Arg	Arg	Ala	Leu	Tyr	Val	Glu	Gly	Glu	Arg	Gly	Phe	Phe	Tyr	Thr	Pro	515	520	525	
Lys	Ala	Leu	Tyr	Leu	Val	Glu	Gly	Glu	Arg	Gly	Phe	Phe	Tyr	Thr	Ser	530	535	540	
Leu	Met	Thr	Ile	Ala	Tyr	Val	Met	Ala	Ala	Ile	Cys	Ala	Leu	Phe	Met	545	550	555	560
Leu	Pro	Leu	Cys	Leu	Met	Val	Asp	Tyr	Lys	Asp	Asp	Asp	Asp	Lys		565	570	575	

<210> 129  
 <211> 5  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: synthetic  
 peptide sequence

<400> 129  
 Lys Met Asp Ala Glu  
 1 5

<210> 130  
 <211> 5  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: synthetic  
 peptide sequence

<400> 130  
 Gly Arg Arg Gly Ser  
 1 5

<210> 131  
 <211> 10  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: synthetic

peptide sequence

<400> 131

Val Glu Ala Asn Tyr Glu Val Glu Gly Glu  
1 5 10

<210> 132

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic  
peptide sequence

<400> 132

Val Glu Ala Asn Tyr Ala Val Glu Gly Glu  
1 5 10

<210> 133

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic  
peptide sequence

<400> 133

Lys Thr Ile Asn Leu Glu Val Glu Pro Ser  
1 5 10

<210> 134

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic  
peptide sequence

<220>

<221> MOD\_RES

<222> (5)

<223> Nle

<400> 134

Lys Thr Ile Asn Xaa Glu Val Glu Pro Ser  
1 5 10

<210> 135

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<221> MOD\_RES

<222> (5)  
 <223> Nle  
  
 <220>  
 <223> Description of Artificial Sequence: synthetic  
           peptide sequence  
  
 <400> 135  
 Lys Thr Ile Asn Xaa Glu Val Asp Pro Ser  
       1                          5                          10  
  
 <210> 136  
 <211> 10  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <221> MOD\_RES  
 <222> (5)  
 <223> Nle  
  
 <220>  
 <223> Description of Artificial Sequence: synthetic  
           peptide sequence  
  
 <400> 136  
 Lys Thr Ile Asn Xaa Asp Val Asp Pro Ser  
       1                          5                          10  
  
 <210> 137  
 <211> 10  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: synthetic  
           peptide sequence  
  
 <400> 137  
 Lys Thr Ile Ser Leu Asp Val Glu Pro Ser  
       1                          5                          10  
  
 <210> 138  
 <211> 10  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: synthetic  
           peptide sequence  
  
 <400> 138  
 Lys Thr Ile Ser Leu Asp Val Asp Pro Ser  
       1                          5                          10  
  
 <210> 139  
 <211> 4  
 <212> PRT  
 <213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<400> 139  
Lys Met Asp Ala  
1

<210> 140  
<211> 4  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<400> 140  
Ser Tyr Glu Val  
1

<210> 141  
<211> 10  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<400> 141  
Ser Glu Val Ser Tyr Glu Val Glu Phe Arg  
1 5 10

<210> 142  
<211> 4  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<400> 142  
Asn Leu Asp Ala  
1

<210> 143  
<211> 10  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<400> 143  
Ser Glu Val Ser Tyr Asp Ala Glu Phe Arg  
1 5 10

<210> 144  
<211> 10  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<400> 144  
Ser Glu Val Ser Tyr Glu Ala Glu Phe Arg  
1 5 10

<210> 145  
<211> 25  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<400> 145  
Thr Arg Pro Gly Ser Gly Leu Thr Asn Ile Lys Thr Glu Glu Ile Ser  
1 5 10 15  
Glu Val Ser Tyr Glu Val Glu Phe Arg  
20 25

<210> 146  
<211> 20  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<400> 146  
Gly Leu Thr Asn Ile Lys Thr Glu Glu Ile Ser Glu Val Ser Tyr Glu  
1 5 10 15  
Val Glu Phe Arg  
20

<210> 147  
<211> 15  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<400> 147  
Lys Thr Glu Glu Ile Ser Glu Val Ser Tyr Glu Val Glu Phe Arg  
1 5 10 15

<210> 148  
 <211> 10  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: synthetic  
       peptide sequence  
  
 <400> 148  
 Thr Glu Val Ser Tyr Glu Val Glu Phe Arg  
   1                  5                 10  
  
 <210> 149  
 <211> 10  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: synthetic  
       peptide sequence  
  
 <400> 149  
 Ser Glu Val Asp Tyr Glu Val Glu Phe Arg  
   1                  5                 10  
  
 <210> 150  
 <211> 10  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: synthetic  
       peptide sequence  
  
 <400> 150  
 Thr Glu Val Asp Tyr Glu Val Glu Phe Arg  
   1                  5                 10  
  
 <210> 151  
 <211> 10  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: synthetic  
       peptide sequence  
  
 <400> 151  
 Thr Glu Ile Asp Tyr Glu Val Glu Phe Arg  
   1                  5                 10  
  
 <210> 152  
 <211> 10  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: synthetic

peptide sequence

<400> 152

Ser Glu Ile Ser Tyr Glu Val Glu Phe Arg  
1 5 10

<210> 153

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic  
peptide sequence

<400> 153

Ser Glu Ile Asp Tyr Glu Val Glu Phe Arg  
1 5 10

<210> 154

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<221> SITE

<222> (11)

<223> Xaa=tryptophan

<220>

<223> Description of Artificial Sequence: synthetic  
peptide sequence

<400> 154

Ser Glu Ile Ser Tyr Glu Val Glu Phe Arg Xaa Lys Lys  
1 5 10

<210> 155

<211> 18

<212> PRT

<213> Artificial Sequence

<220>

<221> SITE

<222> (16)

<223> Xaa=tryptophan

<220>

<223> Description of Artificial Sequence: synthetic  
peptide sequence

<400> 155

Lys Thr Glu Glu Ile Ser Glu Ile Ser Tyr Glu Val Glu Phe Arg Xaa  
1 5 10 15

Lys Lys

<210> 156

<211> 23



<212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <221> SITE  
 <222> (21)  
 <223> Xaa=tryptophan  
  
 <220>  
 <223> Description of Artificial Sequence: synthetic  
           peptide sequence  
  
 <400> 156  
 Gly Leu Thr Asn Ile Lys Thr Glu Glu Ile Ser Glu Ile Ser Tyr Glu Val  
       1                  5                  10                  15  
  
 Glu Phe Arg Xaa Lys Lys  
           20  
  
  
 <210> 157  
 <211> 28  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: synthetic  
           peptide sequence  
  
 <220>  
 <221> SITE  
 <222> (26)  
 <223> Xaa=tryptophan  
  
 <400> 157  
 Thr Arg Pro Gly Ser Gly Leu Thr Asn Ile Lys Thr Glu Glu Ile Ser  
       1                  5                  10                  15  
  
 Glu Ile Ser Tyr Glu Val Glu Phe Arg Xaa Lys Lys  
                   20                  25  
  
  
 <210> 158  
 <211> 13  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <221> SITE  
 <222> (11)  
 <223> Xaa=tryptophan  
  
 <220>  
 <223> Description of Artificial Sequence: synthetic  
           peptide sequence  
  
 <400> 158  
 Ser Glu Ile Ser Tyr Glu Val Glu Phe Arg Xaa Lys Lys  
       1                  5                  10  
  
  
 <210> 159  
 <211> 18

<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<220>  
<221> SITE  
<222> (16)  
<223> Xaa=tryptophan

<400> 159  
Lys Thr Glu Glu Ile Ser Glu Ile Ser Tyr Glu Val Glu Phe Arg  
1 5 10 15

Xaa Lys Lys

<210> 160  
<211> 23  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> SITE  
<222> (21)  
<223> Xaa=tryptophan

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide

<400> 160  
Gly Leu Thr Asn Ile Lys Thr Glu Glu Ile Ser Glu Ile Ser Tyr  
1 5 10 15

Glu Val Glu Phe Arg Xaa Lys Lys  
20

<210> 161  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> SITE  
<222> (26)  
<223> Xaa=tryptophan

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<400> 161  
Thr Arg Pro Gly Ser Gly Leu Thr Asn Ile Lys Thr Glu Glu Ile  
1 5 10 15

Ser Glu Ile Ser Tyr Glu Val Glu Phe Arg Xaa Lys Lys  
20 25

<210> 162  
<211> 13  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> SITE  
<222> (11)  
<223> Xaa=oregon green

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<400> 162  
Ser Glu Ile Ser Tyr Glu Val Glu Phe Arg Xaa Lys Lys  
1 5 10

<210> 163  
<211> 18  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> SITE  
<222> (16)  
<223> Xaa=oregon green

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<400> 163  
Lys Thr Glu Glu Ile Ser Glu Ile Ser Tyr Glu Val Glu Phe Arg Xaa  
1 5 10 15

Lys Lys

<210> 164  
<211> 23  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> SITE  
<222> (21)  
<223> Xaa=oregon green

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<400> 164  
Gly Leu Thr Asn Ile Lys Thr Glu Glu Ile Ser Glu Ile Ser Tyr Glu  
1 5 10 15

Val Glu Phe Arg Xaa Lys Lys  
20

<210> 165  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> SITE  
<222> (26)  
<223> Xaa=oregon green

<220>  
<223> Description of Artificial Sequence: synthetic peptide sequence

<400> 165  
Thr Arg Pro Gly Ser Gly Leu Thr Asn Ile Lys Thr Glu Glu Ile Ser  
1 5 10 15

Glu Ile Ser Tyr Glu Val Glu Phe Arg Xaa Lys Lys  
20 25

<210> 166  
<211> 13  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> SITE  
<222> (11)  
<223> Xaa=oregon green

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<400> 166  
Ser Glu Ile Ser Tyr Glu Val Glu Phe Arg Xaa Lys Lys  
1 5 10

<210> 167  
<211> 18  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> SITE  
<222> (16)  
<223> Xaa=oregon green

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<400> 167  
Lys Thr Glu Glu Ile Ser Glu Ile Ser Tyr Glu Val Glu Phe Arg  
1 5 10 15

Xaa Lys Lys

<210> 168  
<211> 23  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> SITE  
<222> (21)  
<223> Xaa=oregon green

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<400> 168  
Gly Leu Thr Asn Ile Lys Thr Glu Glu Ile Ser Glu Ile Ser Tyr  
1 5 10 15  
Glu Val Glu Phe Arg Xaa Lys Lys  
20

<210> 169  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> SITE  
<222> (26)  
<223> Xaa=oregon green

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<400> 169  
Thr Arg Pro Gly Ser Gly Leu Thr Asn Ile Lys Thr Glu Glu Ile  
1 5 10 15  
Ser Glu Ile Ser Tyr Glu Val Glu Phe Arg Xaa Lys Lys  
20 25

<210> 170  
<211> 10  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<400> 170  
Ser Glu Val Asn Tyr Glu Val Glu Phe Arg  
1 5 10

<210> 171  
<211> 47  
<212> DNA  
<213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: synthetic  
 primer for site-directed mutagenesis of APP

<400> 171  
 gagatctctg aaattagtta tgaagtagaa ttccgacatg actcagg 47

<210> 172  
 <211> 48  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: synthetic  
 primer for site-directed mutagenesis of APP

<400> 172  
 tgagtcatgt cggaattcta cttcataact aatttcagag atctctc 48

<210> 173  
 <211> 47  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: synthetic  
 primer for site-directed mutagenesis of APP

<400> 173  
 gagatctctg aaagtagtta tgaagtagaa ttccgacatg actcagg 47

<210> 174  
 <211> 48  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: synthetic  
 primer for site-directed mutagenesis of APP

<400> 174  
 tgagtcatgt cggaattcta cttcataact actttcagag atctctc 48

<210> 175  
 <211> 47  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: synthetic  
 primer for site-directed mutagenesis of APP

<400> 175  
 gagatctctg aaattagtta tgaagcagaa ttccgacatg actcagg 47

<210> 176  
 <211> 48  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: synthetic  
 primer for site-directed mutagenesis of APP

<400> 176  
tgagtcatgt cggaattctg cttcataact aatttcagag atctcctc

48

<210> 177  
<211> 5  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<400> 177  
Val Ser Tyr Glu Val  
1 5

<210> 178  
<211> 5  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<400> 178  
Val Ser Tyr Asp Ala  
1 5

<210> 179  
<211> 5  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<400> 179  
Ile Ser Tyr Glu Val  
1 5

<210> 180  
<211> 5  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide sequence

<400> 180  
Val Lys Met Asp Ala  
1 5

<210> 181  
<211> 47  
<212> DNA  
<213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: synthetic  
 primer for generating mutant construct named  
 MBPC125-SYEV

<400> 181  
 gacatctctg aagtgagtta ttaggcagaa ttccgacatg actcagg 47

<210> 182  
 <211> 48  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: synthetic  
 primer for generating mutant construct named  
 MBPC125-SYEV

<400> 182  
 tgagtcacatg cggaattctg cctaataact cacttcagag atctcctc 48

<210> 183  
 <211> 6  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: synthetic  
 peptide sequence

<400> 183  
 Lys Lys Ser Tyr Glu Val  
 1 5

<210> 184  
 <211> 10  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: synthetic  
 peptide sequence

<400> 184  
 Val Glu Ala Asn Tyr Glu Val Glu Gly Glu  
 1 5 10

<210> 185  
 <211> 10  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: synthetic  
 peptide sequence

<400> 185  
 Val Glu Ala Asn Tyr Ala Val Glu Gly Glu  
 1 5 10



<210> 186  
 <211> 8  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: synthetic  
           peptide sequence  
  
 <400> 186  
 Asp Tyr Lys Asp Asp Asp Asp Lys  
   1                          5  
  
 <210> 187  
 <211> 4  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: synthetic  
           peptide sequence  
  
 <400> 187  
 Ser Tyr Glu Ala  
   1  
  
 <210> 188  
 <211> 4  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: synthetic  
           peptide sequence  
  
 <400> 188  
 Ser Tyr Ala Val  
   1  
  
 <210> 189  
 <211> 5  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: synthetic  
           peptide sequence  
  
 <400> 189  
 Val Ser Tyr Glu Ala  
   1                          5  
  
 <210> 190  
  
 <211> 13  
  
 <212> PRT  
  
 <213> Artificial sequence

<220>

<223> Description of artificial sequence: synthetic peptide sequence

<400> 190

Ser Glu Ile Ser Tyr Glu Val Glu Phe Arg Trp Lys Lys  
1 5 10

<210> 191

<211> 23

<212> PRT

<213> Artificial sequence

<220>

<223> Description of artificial sequence: synthetic peptide sequence

<400> 191

Gly Leu Thr Asn Ile Lys Thr Glu Glu Ile Ser Glu Ile Ser Tyr Glu  
1 5 10 15

Val Glu Phe Arg Trp Lys Lys  
20

<210> 192

<211> 15

<212> PRT

<213> Artificial sequence

<220>

<223> Description of artificial sequence: synthetic peptide sequence

<220>

<221> SITE

<222> (1)..(1)

<223> amino acid at position 1 is biotinylated

<220>

<221> SITE

<222> (14)..(14)

<223> cys at position 14 is derivatized with an oregon green

<400> 192

Lys	Glu	Ile	Ser	Glu	Ile	Ser	Tyr	Glu	Val	Glu	Phe	Arg	Lys	Lys
1				5					10					15

<210> 193

<211> 22

<212> PRT

<213> Artificial sequence

<220>

<223> Description of artificial sequence: synthetic peptide sequence

<220>

<221> SITE

<222> (1)..(1)

<223> amino acid at position 1 is biotinylated

<220>

<221> SITE

<222> (21)..(21)

<223> cys at position 21 is derivatized with an oregon green

<400> 193

Gly	Leu	Thr	Asn	Ile	Lys	Thr	Glu	Glu	Ile	Ser	Glu	Ile	Ser	Tyr	Glu
1				5					10					15	

Val	Glu	Phe	Arg	Lys	Lys
				20	

<210> 194

<211> 6806

<212> DNA

<213> Artificial sequence

<220>

<223> Description of artificial sequence: synthetic DNA sequence

<400> 194

```
ccgacacccat cgaatggcgc aaaacctttc gcggtatggc atgatagcgc ccggaagaga      60
gtcaattcag ggtggtgaat gtgaaaccag taacgttata cgatgtcgca gagtatgccg      120
gtgtctctta tcagaccgtt tcccgcgtgg tgaaccaggc cagccacgtt tctgcgaaaa      180
cgcgggaaaa agtgggaagcg gcgatggcgg agctgaatta cattcccaac cgcggtggcac      240
aacaactggc gggcaaacag tcgttgctga ttggcgttgc cacctccagt ctggccctgc      300
acgcgcgcgtc gcaaattgtc gcggcgatta aatctcgcgc cgatcaactg ggtgccagcg      360
tggtggtgtc gatggtagaa cgaagcggcg tcgaagcctg taaagcggcg gtgcacaatc      420
ttctcgcgca acgcgtcagt gggctgatca ttaactatcc gctggatgac caggatgcca      480
ttgctgtgga agctgcctgc actaatgttc cggcgttatt tcttgatgtc tctgaccaga      540
caccatcaa cagtattatt ttctcccatg aagacgggtac gcgactgggc gtggagcatc      600
tggtcgcatt gggtcaccag caaatcgcgc tgtagcggg ccattaagt tctgtctcgg      660
cgcgctctcg tctggctggc tggcataaat atctcactcg caatcaaatt cagccgatag      720
cggaacggga aggcgactgg agtgccatgt ccggttttca acaaaccatg caaatgctga      780
atgagggcat cgttcccact gcgatgctgg ttgccaacga tcagatggcg ctgggcgcaa      840
tgcgcgccat taccgagtcg gggctgcgcg ttggtgcgga tatctcggtg gtgggatacg      900
acgataccga agacagctca tgttatatcc cgccgttaac caccatcaaa caggattttc      960
gcctgctggg gcaaaccagc gtggaccgct tgctgcaact ctctcagggc caggcggtga     1020
agggcaatca gctgttgccc gtctcactgg tgaaaagaaa aaccaccctg gcgcccaata     1080
cgcaaaccgc ctctccccgc gcgttggccg attcattaat gcagctggca cgacaggttt     1140
cccgactgga aagcgggcag tgagcgcaac gcaattaatg tgagttagct cactcattag     1200
gcacaattct catgtttgac agcttatcat cgactgcacg gtgcaccaat gcttctggcg     1260
tcaggcagcc atcggaagct gtggtatggc tgtgcaggtc gtaaactact gcataattcg     1320
tgtcgtcaa ggcgcactcc cgttctggat aatgtttttt gcgccgacat cataacggtt     1380
ctggcaaata ttctgaaatg agctgttgac aattaatcat cggctcgtat aatgtgtgga     1440
attgtgagcg gataacaatt tcacacagga aacagccagt ccgtttaggt gttttcacga     1500
gcacttcacc aacaaggacc atagattatg aaaactgaag aaggtaaaact ggtaatctgg     1560
attaacggcg ataaaggcta taacggtctc gctgaagtcg gtaagaaatt cgagaaagat     1620
accggaatta aagtcaccgt tgagcatccg gataaactgg aagagaaatt ccacaggtt     1680
gcggcaactg gcgatggccc tgacattatc ttctgggcac acgaccgctt tggtggctac     1740
```

gctcaatctg	gcctgttggc	tgaaatcacc	ccggacaaaag	cgttccagga	caagctgtat	1800
ccgtttacct	gggatgccgt	acgttacaac	ggcaagctga	ttgcttacct	gatcgctgtt	1860
gaagcgttat	cgctgattta	taacaaagat	ctgctgccga	acccgccaaa	aacctgggaa	1920
gagatcccgg	cgctggataa	agaactgaaa	gcgaaaggta	agagcgcgct	gatgttcaac	1980
ctgcaagaac	cgtacttcac	ctggccgctg	attgctgctg	acgggggtta	tgcgttcaag	2040
tatgaaaacg	gcaagtacga	cattaaagac	gtgggcgtgg	ataacgctgg	cgcgaaagcg	2100
ggctctgacct	tccctgggtga	cctgattaaa	aacaaacaca	tgaatgcaga	caccgattac	2160
tccatcgcag	aagctgcctt	taataaaggc	gaaacagcga	tgaccatcaa	cggcccgtgg	2220
gcatgggtcca	acatcgacac	cagcaaagtg	aattatgggtg	taacgggtact	gccgaccttc	2280
aagggtcaac	catccaaacc	gttcgttggc	gtgctgagcg	caggatttaa	cgccgccagt	2340
ccgaacaaaag	agctggcgaa	agagttcctc	gaaaactatc	tgctgactga	tgaaggctctg	2400
gaagcgggtta	ataaagacaa	accgctgggt	gccgtagcgc	tgaagtctta	cgaggaagag	2460
ttggcgaaaag	atccacgtat	tgccgccacc	atggaaaacg	cccagaaagg	tgaaatcatg	2520
ccgaacatcc	cgcagatgtc	cgctttctgg	tatgccgtgc	gtactgcggt	gatcaacgcc	2580
gccagcggtc	gtcagactgt	cgatgaagcc	ctgaaagacg	cgcagactaa	ttcgagctcg	2640
gtacccggcc	ggggatccat	cgagggtagg	gccgaccgag	gactgaccac	tcgaccaggt	2700
tctgggttga	caaatatcaa	gacggaggag	atctctgaag	tgaatctgga	tgcagaattc	2760
cgacatgact	caggatatga	agttcatcat	caaaaattgg	tgttctttgc	agaagatgtg	2820
ggttcaaaca	aagggtgcaat	cattggactc	atggtgggcg	gtgttggtcat	agcgacagtg	2880
atcgatcatca	ccttggtgat	gctgaagaag	aaacagtaca	catccattca	tcattggtgtg	2940
gtggagggttg	acgccgctgt	caccccagag	gagcgccacc	tgtccaagat	gcagcagaac	3000
ggctacgaaa	atccaacctc	caagttcttt	gagcagatgc	agaactagac	ccccgccaca	3060
gcagcctctg	aagttggaca	gcaaaaacct	tgcttcacta	cccatcggtg	tccatttata	3120
gaataatgtg	ggaagaaaca	aacctgtttt	atgatttact	cattatcgcc	ttttgacagc	3180
tgtgctgtaa	cacaagtaga	tgctgaact	tgaattaatc	cacacatcag	taatgtattc	3240
tatctctctt	tacatttttg	tctctatact	acattattaa	tgggttttgt	gtactgtaaa	3300
gaatttagct	gtatcaaact	agtaatagcc	tgaattcagt	aacctaaccc	tcgatggatc	3360
ctctagagtc	gacctgcagg	caagcttggc	actggccgtc	gtttttacaac	gtcgtgactg	3420
ggaaaaccct	ggcgttacct	aacttaatcg	ccttgcagca	catccccctt	tcgccagctg	3480
gcgtaatagc	gaagaggccc	gcaccgatcg	cccttcccaa	cagttgcgca	gcctgaatgg	3540
cgaatggcag	cttggctgtt	ttggcggatg	agagaagatt	ttcagcctga	tacagattaa	3600
atcagaacgc	agaagcggtc	tgataaaaaca	gaatttgcct	ggcggcagta	gcgcgggtgg	3660

cccacctgac	cccatgccga	actcagaagt	gaaacgccgt	agcgccgatg	gtagtgtggg	3720
gtctcccat	gcgagagtag	ggaactgcc	ggcatcaa	aaaacgaaag	gctcagtcga	3780
aagactgggc	ctttcgtttt	atctgttgtt	tgtcggtgaa	cgctctcctg	agtaggacaa	3840
atccgccggg	agcggatttg	aacgttgcca	agcaacggcc	cggagggtgg	cgggcaggac	3900
gccccccata	aactgccagg	catcaaatta	agcagaaggc	catcctgacg	gatggccttt	3960
ttgcgtttct	acaaactcct	tttgtttatt	tttctaaata	cattcaaata	tgtatccgct	4020
catgagacaa	taaccctgat	aatgcttca	ataatattga	aaaaggaaga	gtatgagtat	4080
tcaacatttc	cgtgtcgccc	ttattccctt	ttttgcgcca	ttttgccttc	ctgtttttgc	4140
tcaccagaa	acgctgggtga	aagtaaaaga	tgctgaagat	cagttgggtg	cacgagtggtg	4200
ttacatcgaa	ctggatctca	acagcggtaa	gaccttgag	agttttcgcc	ccgaagaacg	4260
ttttccaatg	atgagcactt	ttaaagttct	gctatgtggc	gcggtattat	cccgtgttga	4320
cgccgggcaa	gagcaactcg	gtcgccgcat	acactattct	cagaatgact	tggttgagta	4380
ctcaccagtc	acagaaaagc	atcttacgga	tggcatgaca	gtaagagaat	tatgcagtgc	4440
tgccataacc	atgagtgata	acactgcggc	caacttactt	ctgacaacga	tcggaggacc	4500
gaaggagcta	accgcttttt	tgcacaacat	gggggatcat	gtaactcgcc	ttgatcgttg	4560
ggaaccggag	ctgaatgaag	ccataccaaa	cgacgagcgt	gacaccacga	tgctgtagc	4620
aatggcaaca	acgttgcgca	aactattaac	tggcgaacta	cttactctag	cttcccggca	4680
acaattaata	gactggatgg	aggcggataa	agttgcagga	ccacttctgc	gctcggccct	4740
tccggctggc	tggtttattg	ctgataaatc	tggagccggt	gagcgtgggt	ctcgcggtat	4800
cattgcagca	ctggggccag	atggtaagcc	ctcccgatc	gtagttatct	acacgacggg	4860
gagtcaggca	actatggatg	aacgaaatag	acagatcgct	gagatagggtg	cctcactgat	4920
taagcattgg	taactgtcag	accaagttta	ctcatatata	ctttagattg	atttaaaact	4980
tcatttttaa	tttaaaagga	tctaggtgaa	gacctttttt	gataatctca	tgacaaaaat	5040
cccttaacgt	gagttttcgt	tccactgagc	gtcagacccc	gtagaaaaga	tcaaaggatc	5100
ttcttgagat	cctttttttc	tgcgcgtaat	ctgctgcttg	caaacaaaaa	aaccaccgct	5160
accagcggtg	gtttgtttgc	cggatcaaga	gctaccaact	ctttttccga	aggtaactgg	5220
cttcagcaga	gcgcagatac	caaatactgt	ccttctagt	tagccgtagt	taggccacca	5280
cttcaagaac	tctgtagcac	cgctacata	cctcgctctg	ctaactcctgt	taccagtggc	5340
tgctgccagt	ggcgataagt	cgtgtcttac	cgggttgga	tcaagacgat	agttaccgga	5400
taaggcgcag	cggtcgggct	gaacgggggg	ttcgtgcaca	cagcccagct	tggagcgaac	5460
gacctacacc	gaactgagat	acctacagcg	tgagctatga	gaaagcgcca	cgcttcccgga	5520
agggagaaaag	gcggacaggt	atccggtaag	cggcagggtc	ggaacaggag	agcgcacgag	5580

```

ggagcttcca gggggaaaacg cctggtatct ttatagtcct gtcgggtttc gccacctctg 5640
acttgagcgt cgatttttgt gatgctcgtc aggggggscg agcctatgga aaaacgccag 5700
caacgcggcc tttttacggt tcctggcctt ttgctggcct tttgctcaca tgttctttcc 5760
tgcgttatcc cctgattctg tggataaccg tattaccgcc tttgagttag ctgataccgc 5820
tcgccgcagc cgaacgaccg agcgcagcga gtcagttagc gaggaagcgg aagagcgcct 5880
gatgcggtat tttctcctta cgcactctgt cggtatttca caccgcatat ggtgcactct 5940
cagtacaatc tgctctgatg ccgcatagtt aagccagtat aactccgct atcgctacgt 6000
gactgggtca tggctgcgcc ccgacacccg ccaacacccg ctgacgcgcc ctgacgggct 6060
tgtctgctcc cggcatccgc ttacagacaa gctgtgaccg tctccgggag ctgcatgtgt 6120
cagaggtttt caccgtcatc accgaaacgc gcgaggcagc tgcggtaaag ctcacagcgc 6180
tggctcgtgaa gcgattcaca gatgtctgcc tgttcatccg cgtccagctc gttgagtttc 6240
tccagaagcg ttaatgtctg gcttctgata aagcgggcca tgttaagggc ggttttttcc 6300
tgtttggtca cttgatgcct ccgtgtaagg ggggaatttct gttcatgggg gtaatgatac 6360
cgatgaaacg agagaggatg ctcacgatac gggttactga tgatgaacat gcccgggtac 6420
tggaacgttg tgagggtaaa caactggcgg tatggatgcg gcgggaccag agaaaaatca 6480
ctcagggtca atgccagcgc ttcgttaata cagatgtagg tgttccacag ggtagccagc 6540
agcatcctgc gatgcagatc cggaacataa tgggtgcagg cgctgacttc cgcgtttcca 6600
gactttacga aacacggaaa ccgaagacca ttcattgtgt tgctcagggt gcagacgttt 6660
tgcagcagca gtcgcttcac gttcgctcgc gtatcggtga ttcattctgc taaccagtaa 6720
ggcaaccccg ccagcctagc cgggtcctca acgacaggag cagatcatg cgcacccgtg 6780
gccaggaccc aacgctgccc gaaatt 6806

```

<210> 195

<211> 13

<212> PRT

<213> Artificial sequence

<220>

<223> Description of artificial sequence: synthetic peptide sequence

<220>

<221> MOD\_RES

<222> (1)..(1)

<223> ACETYLATION (MCA)

<220>

<221> SITE

<222> (11)..(11)

<223> 2,4-dinitrophenyl group after the Lys at position 11

<400> 195

Ser Glu Val Asn Leu Asp Ala Glu Phe Arg Lys Arg Arg  
1 5 10

<210> 196

<211> 12

<212> PRT

<213> Artificial sequence

<220>

<223> Description of artificial sequence: synthetic peptide sequence

<220>

<221> SITE

<222> (4)..(4)

<223> amino acid at position 4 has been derivatized with a statine

<400> 196

Ser Glu Val Asn Val Ala Glu Phe Arg Gly Gly Cys  
1 5 10

<210> 197

<211> 10

<212> PRT

<213> synthetic peptide sequence

<220>

<221> SITE

<222> (4)..(4)



<223> amino acid at position 4 has been derivatized with a statine

<220>

<221> SITE

<222> (10)..(10)

<223> amino acid at position 10 has been derivatized with Bodipy FL

<400> 197

Ser Glu Val Asn Val Ala Glu Phe Arg Cys  
1 5 10

<210> 198

<211> 2043

<212> DNA

<213> Mus musculus

<400> 198

```
atggccccag cgctgcactg gtccttgcta tgggtgggct cggaatgct gcctgcccag      60
ggaacccatc tcggcatccg gctgcccctt cgcagcggcc tggcagggcc acccctgggc      120
ctgaggctgc cccgggagac tgacgaggaa tcggaggagc ctggccggag aggcagcttt      180
gtggagatgg tggacaacct gaggggaaag tccggccagg gctactatgt ggagatgacc      240
gtaggcagcc cccacagac gctcaacatc ctggtggaca cgggcagtag taactttgca      300
gtgggggctg cccacacccc ttctctgcat cgctactacc agaggcagct gtccagcaca      360
tatcgagacc tccgaaaggg tgtgtatgtg ccctacaccc agggcaagtg ggagggggaa      420
ctgggcaccg acctggtgag catccctcat ggccccaacg tcaactgtgc tgccaacatt      480
gctgccatca ctgaatcgga caagttcttc atcaatggtt ccaactggga gggcatccta      540
gggctggcct atgctgagat tgccaggccc gacgactctt tggagccctt ctttgactcc      600
ctggtgaagc agaccacat tccaacatc tttccctgc agctctgtgg cgctggcttc      660
ccctcaacc agaccgaggc actggcctcg gtgggaggga gcatgatcat tggtggtatc      720
gaccactcgc tatacacggg cagtctctgg tacacaccca tccggcggga gtggtattat      780
gaagtgatca ttgtacgtgt ggaaatcaat ggtcaagatc tcaagatgga ctgcaaggag      840
tacaactacg acaagagcat tgtggacagt gggaccacca accttcgctt gccaagaaa      900
gtatttgaag ctgccgtcaa gtccatcaag gcagcctcct cgacggagaa gttcccggat      960
ggcttttggc taggggagca gctggtgtgc tggcaagcag gcacgacccc ttggaacatt     1020
ttcccagtc tttcacttta cctcatgggt gaagtcacca atcagtcctt ccgcatcacc     1080
atccttcttc agcaatacct acggccggtg gaggacgtgg ccacgtccca agacgactgt     1140
```

tacaagttcg	ctgtctcaca	gtcatccacg	ggcactgtta	tgggagccgt	catcatggaa	1200
ggtttctatg	tcgtcttcga	tcgagcccga	aagcgaattg	gctttgctgt	cagcgcttgc	1260
catgtgcacg	atgagttcag	gacggcggca	gtggaaggtc	cgtttggttac	ggcagacatg	1320
gaagactgtg	gctacaacat	tccccagaca	gatgagtcaa	cacttatgac	catagcctat	1380
gtcatggcgg	ccatctgcgc	cctcttcacg	ttgccactct	gcctcatggg	atgtcagtgg	1440
cgctgcctgc	gttgccctgcg	ccaccagcac	gatgactttg	ctgatgacat	ctccctgctc	1500
aagtaaggag	gctcgtgggc	agatgatgga	gacgcccctg	gaccacatct	gggtgggtcc	1560
ctttggtcac	atgagttgga	gctatggatg	gtacctgtgg	ccagagcacc	tcaggaccct	1620
caccaacctg	ccaatgcttc	tggcgtgaca	gaacagagaa	atcaggcaag	ctggattaca	1680
gggcttgcac	ctgtaggaca	caggagaggg	aaggaagcag	cgttctgggtg	gcaggaatat	1740
ccttaggcac	cacaaacttg	agttggaaat	tttgctgctt	gaagcttcag	ccctgaccct	1800
ctgcccagca	tccttttagag	tctccaacct	aaagtattct	ttatgtcctt	ccagaagtac	1860
tggcgtcata	ctcaggctac	ccggcatgtg	tcctgtgggt	accctggcag	agaaagggcc	1920
aatctcattc	cctgctggcc	aaagtcagca	gaagaagggtg	aagtttgcca	gttgcttttag	1980
tgatagggac	tgacagactca	agcctacact	ggtacaaaga	ctgcgtcttg	agataaacia	2040
gaa						2043

<210> 199  
 <211> 501  
 <212> PRT  
 <213> Mus musculus

<400> 199

Met	Ala	Pro	Ala	Leu	His	Trp	Leu	Leu	Leu	Trp	Val	Gly	Ser	Gly	Met
1				5					10					15	
Leu	Pro	Ala	Gln	Gly	Thr	His	Leu	Gly	Ile	Arg	Leu	Pro	Leu	Arg	Ser
			20					25					30		
Gly	Leu	Ala	Gly	Pro	Pro	Leu	Gly	Leu	Arg	Leu	Pro	Arg	Glu	Thr	Asp
		35					40					45			
Glu	Glu	Ser	Glu	Glu	Pro	Gly	Arg	Arg	Gly	Ser	Phe	Val	Glu	Met	Val
	50					55					60				
Asp	Asn	Leu	Arg	Gly	Lys	Ser	Gly	Gln	Gly	Tyr	Tyr	Val	Glu	Met	Thr
65					70				75						80
Val	Gly	Ser	Pro	Pro	Gln	Thr	Leu	Asn	Ile	Leu	Val	Asp	Thr	Gly	Ser
			85					90						95	
Ser	Asn	Phe	Ala	Val	Gly	Ala	Ala	Pro	His	Pro	Phe	Leu	His	Arg	Tyr
		100						105					110		
Tyr	Gln	Arg	Gln	Leu	Ser	Ser	Thr	Tyr	Arg	Asp	Leu	Arg	Lys	Gly	Val
	115						120					125			

Tyr	Val	Pro	Tyr	Thr	Gln	Gly	Lys	Trp	Glu	Gly	Glu	Leu	Gly	Thr	Asp		
130						135					140						
Leu	Val	Ser	Ile	Pro	His	Gly	Pro	Asn	Val	Thr	Val	Arg	Ala	Asn	Ile		
145					150					155					160		
Ala	Ala	Ile	Thr	Glu	Ser	Asp	Lys	Phe	Phe	Ile	Asn	Gly	Ser	Asn	Trp		
				165					170						175		
Glu	Gly	Ile	Leu	Gly	Leu	Ala	Tyr	Ala	Glu	Ile	Ala	Arg	Pro	Asp	Asp		
			180					185						190			
Ser	Leu	Glu	Pro	Phe	Phe	Asp	Ser	Leu	Val	Lys	Gln	Thr	His	Ile	Pro		
	195						200					205					
Asn	Ile	Phe	Ser	Leu	Gln	Leu	Cys	Gly	Ala	Gly	Phe	Pro	Leu	Asn	Gln		
	210					215					220						
Thr	Glu	Ala	Leu	Ala	Ser	Val	Gly	Gly	Ser	Met	Ile	Ile	Gly	Gly	Ile		
225					230					235					240		
Asp	His	Ser	Leu	Tyr	Thr	Gly	Ser	Leu	Trp	Tyr	Thr	Pro	Ile	Arg	Arg		
				245					250					255			
Glu	Trp	Tyr	Tyr	Glu	Val	Ile	Ile	Val	Arg	Val	Glu	Ile	Asn	Gly	Gln		
			260					265						270			
Asp	Leu	Lys	Met	Asp	Cys	Lys	Glu	Tyr	Asn	Tyr	Asp	Lys	Ser	Ile	Val		
		275					280					285					
Asp	Ser	Gly	Thr	Thr	Asn	Leu	Arg	Leu	Pro	Lys	Lys	Val	Phe	Glu	Ala		
	290					295					300						
Ala	Val	Lys	Ser	Ile	Lys	Ala	Ala	Ser	Ser	Thr	Glu	Lys	Phe	Pro	Asp		
305					310					315					320		
Gly	Phe	Trp	Leu	Gly	Glu	Gln	Leu	Val	Cys	Trp	Gln	Ala	Gly	Thr	Thr		
			325						330					335			
Pro	Trp	Asn	Ile	Phe	Pro	Val	Ile	Ser	Leu	Tyr	Leu	Met	Gly	Glu	Val		
			340					345					350				
Thr	Asn	Gln	Ser	Phe	Arg	Ile	Thr	Ile	Leu	Pro	Gln	Gln	Tyr	Leu	Arg		
	355						360					365					
Pro	Val	Glu	Asp	Val	Ala	Thr	Ser	Gln	Asp	Asp	Cys	Tyr	Lys	Phe	Ala		
	370					375					380						
Val	Ser	Gln	Ser	Ser	Thr	Gly	Thr	Val	Met	Gly	Ala	Val	Ile	Met	Glu		
385					390					395					400		
Gly	Phe	Tyr	Val	Val	Phe	Asp	Arg	Ala	Arg	Lys	Arg	Ile	Gly	Phe	Ala		
			405					410					415				
Val	Ser	Ala	Cys	His	Val	His	Asp	Glu	Phe	Arg	Thr	Ala	Ala	Val	Glu		
			420					425					430				
Gly	Pro	Phe	Val	Thr	Ala	Asp	Met	Glu	Asp	Cys	Gly	Tyr	Asn	Ile	Pro		
		435					440					445					
Gln	Thr	Asp	Glu	Ser	Thr	Leu	Met	Thr	Ile	Ala	Tyr	Val	Met	Ala	Ala		
	450					455					460						

Ile Cys Ala Leu Phe Met Leu Pro Leu Cys Leu Met Val Cys Gln Trp  
465 470 475 480

Arg Cys Leu Arg Cys Leu Arg His Gln His Asp Asp Phe Ala Asp Asp  
485 490 495

Ile Ser Leu Leu Lys  
500